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Predynastic & Pharaonic era Rock-Art in Egypt's Central Eastern Desert: Distribution, Dating & Interpretation



Thesis submitted for the degree of Ph.D.
Archaeology, Durham University, 2012
by Francis Lankester

Dedication

This thesis is dedicated to David Rohl-without whom it would never have been started, and to my mother-without whom it would never have been finished.

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Above all, I would like to thank Margarita Díaz-Andreu and Penny Wilson for their tremendously hard work and necessary patience as my supervisors over the years of this study, and for guiding me in my academic research and writing.

I would never have conceived an interest in Egyptian rock-art without the enthusiasm and support of all the members of the Eastern Desert Survey, and the efforts of the staff and drivers of Ancient World Tours. I must also gratefully acknowledge the ideas, updates, images and feedback given to me by Russ Rothe, Andrea Byrnes, Cheryl Hanson, Aude van Craeynest, Gwenola Graff, Dirk Huyge, Hans Barnard, Barbara Tratsaert, Yarko Koblecky, Mike Shepherd, Kathryn Piquette, Stan Hendrickx and Ian Shaw.

In Memoriam: Hans A. Winkler, 1900-45.

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Egypt's Central Eastern Desert Rock-Art: Distribution, Dating & Interpretation

Abstract

The aim of this thesis is to examine the rock-art of Egypt's Central Eastern Desert in order to outline the petroglyphs' distribution and influences on their location, to date them, and to explore the reasons why they were created. The area is notable for the presence of boat petroglyphs, along with images of people and a wide range of fauna, in the middle of the desert many miles from the Nile and Red Sea. Since Hans Winkler's pioneering work in the 1930's, the corpus covering the whole of the area has been considerably increased due to work from the 1980's to the present, thanks mainly to the Eastern Desert Survey (EDS) and the Rock Art Topographical Survey (RATS).

The construction of a comprehensive corpus enables an analysis of the distribution of the approximately 4000 images, the dating of a significant majority of the rock-art sites and interpretation of the reasons for their creation. Many of the petroglyphs were probably made in the early predynastic period: Naqada I c to II a/b (which scholars generally date from 3750 to 3650 BCE), and often show hunting scenes associated with boats, or even have vessels integrated within them. As the spatial analysis carried out in this work demonstrates, these motifs are often located in shaded locations and, especially in the south of the survey area, near to the entrances to side wadis. In contrast, the smaller numbers of dynastic and Greco-Roman images are usually situated on routes to the mines and quarries of the Eastern Desert, as well as to the Red Sea.

This thesis also proposes a new approach to the interpretation of boats and the figures with arms raised and incurved above the head. As opposed to common scholarly practice where they have previously been interpreted by retrospective comparison with pharaonic themes, I pursue a synchronic approach to interpretation, placing the predynastic motifs in Naqada culture funerary context linked to hunting as an elite activity. The later rock-art is divided between pharaonic images related to mining and quarrying expeditions, and horse and camel riders pictured in unique conflict scenes.

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“The desert is the breathing space of the world, and therein one truly breathes and lives.”
(Sir Arthur Weigall, 1909: 151)

Preface

Ninety-five percent of Egypt is desert, and in modern times Egypt's deserts are some of the driest and most sparsely inhabited places on earth. It was not always so. A moister climate existed from around 8500-4300 BP and there are many examples among the petroglyphs in Egypt's Central Eastern Desert of the fauna from that more favourable climatic period. This seems to be ratified by palaeo-fauna and palaeo-botanic remains (Vermeersch et al. 1994; Brooks, 2004). Above all, the presence of images of boats in the middle of what is now dry desert particularly inspired the Eastern Desert Survey (Rohl, 2000) and Rock Art Topographical Survey (Morrow & Morrow, 2002) survey teams and promoted the production of this study. The presence of boats is, however, intriguing. While we may view the production of animal images as a reflection of reality, this cannot be the case with boats. This means that there is much more to these images than a faithful representation of immediate reality.

This thesis began almost by accident. In 1997 David Rohl, an archaeology graduate of University College London, launched the Eastern Desert Survey as part of his investigation into pharaonic Egypt's origins. As a result, dedicated teams of 'amateur' surveyors began the work which resulted in coverage of most of the area, as well as some of the Kom Ombo watershed. Without his initiative and leadership the work would not have been done, as after the pioneering efforts by Hans Winkler, the German Egyptologist who led the 1930s Robert Mond Expedition in the north and north-central zone (Winkler, 1938), professional Egyptologists generally have not had the opportunity to undertake an area-wide survey. Logistical difficulties in the desert have probably contributed to this. Significantly, outside of the Nile Valley and the oases, modern rock-art study in Egypt has been mainly carried out by teams unconnected with an academic institution, notably the EDS and RATS teams in the Eastern Desert and Zboray in the Gilf Kebir and Uweinat. Through the efforts of the Eastern Desert Survey a considerable corpus was compiled.

The spirit of the EDS experience has motivated the writing of this study. Later, the Rock Art Topographical Survey in Egypt's Eastern Desert (RATS) recorded further new sites. The latter was led by Egyptologist Dr. Toby Wilkinson (Cambridge), a professional Egyptologist and author of two significant publications concerning predynastic and early dynastic Egypt

(Wilkinson, 1996 & 1999). Wilkinson had also participated in the 1999 EDS expedition in which this writer was a recording team leader. Aside from recording expedition catalogues there has been only one book devoted entirely to the petroglyphs of the Central Eastern Desert. In 2002 Wilkinson published *Genesis of the Pharaohs* with the sub-heading, 'Dramatic New Discoveries that Rewrite the Origins of Ancient Egypt,' based on his experiences. Wilkinson presented the petroglyphs as a link between valley and desert, proposing that semi-nomadic cattle herders moved from the Nile Valley into the then moister desert and back in step with seasonal grazing patterns, especially in the Badarian and Naqada I periods. The gradual and steady desiccation of these pastures then forced these pastoralists to become entirely sedentary, thus kick-starting Egyptian civilisation. Scenes of towed boats and twin-plumed figures in particular seemed to him to foreshadow later pharaonic ideological and religious motifs.

Reviews were mixed, ranging from Campagno (2005) at one extreme, who welcomed the overview of the Eastern Desert rock-art, to the hostile Wengrow (2003) at the other. Titling his review "Tourists," Wengrow not only labelled *Genesis*' subtitle as "sensational" (Wengrow, 2003: 599) but criticised the whole practice of "letting loose groups of unqualified tourists on those (same) images, and then claiming they have been properly studied and dated." He ended with a dismissive reference to "holidays for a foreign elite," and exaggeratingly suggested that the recording had endangered the petroglyphs (Wengrow, 2003: 601). In fact, it is the modern roads, where drivers stop to graffiti sites such as BAR-9 and 10, quarrying and treasure hunters which threaten the rock-art. Wengrow did also reasonably point out the problems associated with stylistic dating, and the assumption that semi-nomadic pastoralism was common in the valley/desert context.

Due to the polarisation of discussion, in 2004 a balanced debate was organised in the pages of the *Cambridge Archaeological Journal* in which five distinguished academics, Karl Butzer (University of Texas), Dirk Huyge and Stan Hendrickx (both of the Royal Museum of Art and History, Brussels), Tim Kendall (University of Rome Archaeological Mission) and Ian Shaw (University of Liverpool) were invited to comment on the issues raised in 'Genesis.' Kendall supported Wilkinson's contention of a strong connection between pastoralists and the petroglyphs, especially those images where the arms are raised above the head and incurved. Comparing this image to the practice of modern Nuer Sudanese pastoralists, a practice which Wengrow (2003) criticised as returning to the 'Hamitic Thesis,' Kendall suggested that it was a gesture of mourning when found with boat images. Thus, the idea of the king's essence or

‘ka’ was already developed among rulers in the Naqada I period. He also readily accepted that twin-plumed human figures in the rock-art could be identified as precursors of the god Min (Kendal, 2004: 125).

Other contributors saw the perceived connections with pastoral and pharaonic themes as contrived and based on flimsy evidence. Butzer noted the paucity of archaeological evidence, with the exception of some Naqada material at Laqeita (Debono 1950 & 1951), to back up an interpretative and dating framework for the petroglyphs. He preferred mineral gathering expeditions as an explanation of why the creators of the petroglyphs ventured away from the Nile Valley. Butzer undermined the case for significant pastoral activity in the Eastern Desert. Whereas Wilkinson suggested that grazing there took place in the summer due to monsoon rains causing the Nile floodplain to be under water, Butzer maintained that recorded flood events took place in winter. Much better grazing would therefore have been available close to the Nile. He also proposed that “at the best of times, the valleys of the Eastern Desert had a low, thorn-tree and sparse-grass savannah of semi-desert type....hardly a habitat for large herds or plentiful pastoralists” (Butzer, 2004: 119). Hendrickx concurred and stressed the importance of agriculture to Nile Valley dwellers from an earlier period than Wilkinson was prepared to acknowledge. While Wilkinson saw farming as the major subsistence activity only from the mid-fourth millennium onwards, Hendrickx’s view was that both this and a stratified society, from which it developed, are apparent from the Badarian period. Research from Maghar Dendera II suggested that people were living close to the Nile until September, giving very little time to move herds as they would be required for work in the fields. In addition, he noted that good pasturage would have been available close to the Nile (Hendrickx, 2004: 123).

The only rock-art specialist of the five participants, Dirk Huyge, responded to Wilkinson’s use of dating by style and his interpretation of the motifs. He noted the problems associated with comparing motifs on Nile Valley objects with often unique rock-art examples presented by Wilkinson. He also urged caution in using the fauna petroglyphs to indicate a very early date for the images, since elephant and giraffe are present in Naqada III, and indeed pharaonic and later contexts. In answer to Wilkinson’s proposal that funerary themes are prominent, Huyge preferred life and solar beliefs as an explanation, resting on his work at El Kab (Huyge, 1995). Shaw, the final contributor, backed the method of extrapolating backwards in time which Huyge describes as “an entirely admissible hermeneutic procedure” (Huyge, 2002: 121). However, he wisely cautioned that Huyge himself commented that “The

intimate relationship between the rock drawings and the ancient *Weltanschauung* of which the El Kab petroglyphs seem to bear evidence can therefore be generalised only hypothetically for the whole of the ancient Egyptian rock-art tradition” (Huyge, 2002: 204).

Replying to the debate, Wilkinson acknowledged that in producing a ‘popular’ publication, the style may have detracted from the material. Defending the art-historical approach to dating rock-art, he acknowledged that further detailed study was necessary concerning differences in style between those in the desert and the Nile Valley, which he had neglected in ‘Genesis.’ He concluded that someone should “produce a book on the analysis and interpretation of Egyptian rock art without any of the distractions presented by a popular audience,” and asked for volunteers (Wilkinson, 2003: 132). This study takes up that challenge.

“There is no shortcut to an understanding of the ancients.”

(Henri Frankfort, 1978: 78)

Introduction

The aim of this study is to explore the rock-art of the Central Eastern Desert and has three objectives: to outline the petroglyphs’ distribution, to date them, and to explain who created them and for what purpose. It focuses in detail on the animal, human and boat images within the context in which they were created; the landscape of what is now the Central Eastern Desert, and the Naqada, Pharaonic and Greco-Roman Egyptian cultures.

The term rock-art with “its overlapping meanings point to representational meanings and to skilled craftwork, with indications of a world of symbolism” (Chippindale & Nash, 2004: 22). The symbolic part of this definition can be accepted, although there is the possibility that some images are doodling, or in effect ancient graffiti by travellers passing the time. We can see the landscape of the Eastern Desert “not only as a reservoir of material resources to be exploited but also as a social phenomenon that is the object of symbolic practices and representations,” (Arsenault, 2004: 72) since “landscapes are matters of human perception and of cultural experience” (Chippindale & Nash, 2004: 37).

The landscape of the survey area is a source of power, both in access to valuable raw materials for buildings and gift exchange, but also to symbolic power in the use of minerals for rejuvenation in tombs, and through petroglyphs on the rocks in the representation of control of ‘wildness’ in the predynastic era. In considering the marking of the desert the concept of ‘ritual depth’ (Diaz-Andreu, 2001) is applicable. Some locations may be more ritually charged than others, contributing to an uneven ritual depth of the landscape. In the light of the presence of quarries and gold mines in the Eastern Desert, how much of the landscape is secular rather than ritualistic?

The landscape in which petroglyphs has been examined in relation to topographical features ‘attracting’ rock-art. For example, Bradley (1997) stressed inter-visibility, usually between the features on which the images are situated rather than the carved rocks themselves. He also suggested that petroglyphs may delineate sacred routes to a ceremonial centre, with more complex sites situated at ‘entrances’ in the natural terrain on the way to such centres. In order to reach the centre, people may have been required to visit a series of petroglyph sites. The Central Eastern Desert does not have megalithic monuments, but the possibility that routes

can be traced through the wadi system is examined. This distinctive system channels travellers through routes of differing ease of movement and access to water resources. Thus, the relationship of sites to entrances to the main wadis, and to side wadis, is an important consideration.

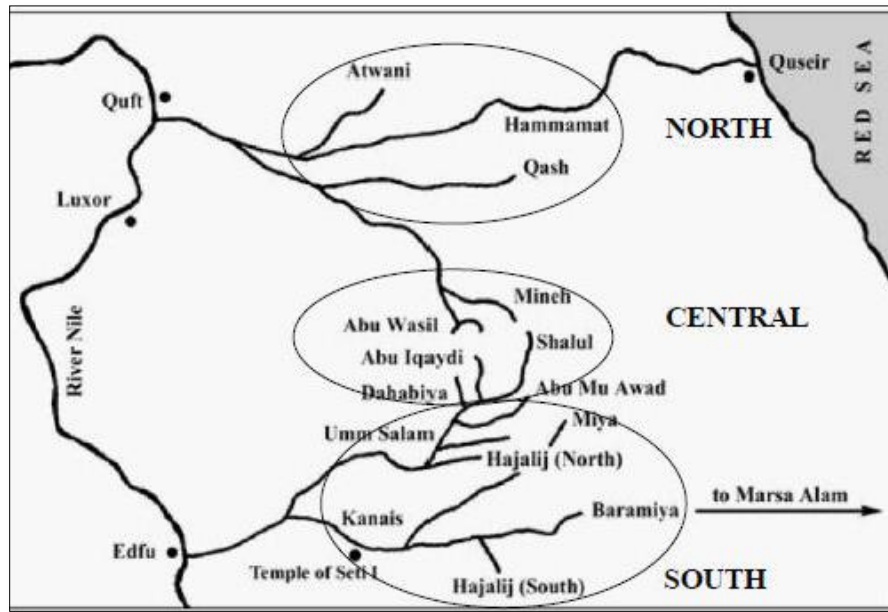
It is notable how little the petroglyphs of the Central Eastern Desert, and indeed of the Eastern Desert in general, have featured hitherto, both in Egyptology and in the study of rock-art in general. Winkler's pioneering but partial study, together with his preliminary publication under the auspices of the Egypt Exploration Society have been, for many years, the main point of reference for those concerned with Egyptian rock-art in the desert. The lack of a comprehensive corpus encompassing the Eastern Desert meant that integration of the petroglyph evidence into the archaeology of especially early Egypt has been problematic.

Fortunately, there is a rich material culture in which to contextualise the petroglyphs. This has had its advantages and disadvantages. On the one hand, there is much published archaeological work from predynastic sites in the Nile Valley which has proved useful for this study, especially concerning the C and D-Ware pottery, which have some comparable motifs to those found in the rock-art. On the other hand, there has been a heavy reliance on a retrospective approach, attempting to trace pharaonic motifs and religious ideas back to their alleged origins in the predynastic era. This study eschews that approach and instead proposes an interpretation of the early scenes connected with Naqada culture funerary practice as evidenced by predynastic Nile Valley archaeology. Even the pharaonic and later petroglyphs have suffered from the lack until recently (Rothe, 2008) of a comprehensive publication of the hieroglyphic inscriptions made in the Eastern Desert in the Old, Middle and New Kingdoms.

The situation regarding the publication, and now the analysis, of the rock-art and inscriptions in the Eastern Desert has been much improved in recent years with the work in the desert behind Thebes (Darnell, 2002), and near Aswan (Gatto, 2009 & Storemyr, 2009) and at Hierakonpolis (Hardtke, 2009 & 2010). Tony Judd (2009) set the petroglyphs not only of the Central Eastern Desert, but also at least partially the Kom Ombo Drainage Basin material, in the context of surrounding areas. By examining the material of the 1960's Nubian UNESCO rescue campaigns and evidence from the Sahara, Arabia and the Negev, Judd demonstrated the uniqueness of much of the Eastern Desert rock-art. This study places the Central Eastern Desert petroglyphs in their Egyptian context. We can now not only compare rock-art motifs

with those on pottery and other media found in the Nile Valley, but the inscriptional evidence can be used to assist explanation of the presence and distribution of pharaonic and Greco-Roman images. An integrated approach with its departure from the Naqada and pharaonic cultures is necessary, for “how is one to know what strikes me today must have anything in common with what ancient people found and felt telling? (Chippindale & Nash, 2004: 13). Although some further recording remains to be done south of Wadi Baramiya, and the material which has been recorded there is only partially published, the unified corpus provided by Judd and in this work will hopefully constitute a significant contribution to the study of ancient Egypt concerning early culture and society in relationship with the landscape, and religious and ritual practice.

The rock-art in the survey area is located within a zone bounded by the Wadi Hammamat-Quseir road in the north, the Red Sea hills in the east, the Nile Valley in the west and the Wadi Baramiya-Mersa Alam road in the south. This forms an approximate rectangle 125 by 50 km (6,250 sq km) 25-26° N/33°-33° 45' E and is divided here into Northern, Central and Southern areas (Map 1). The only exceptions to this ‘frame’ are the petroglyphs in the peripheral wadis El Atwani (Northern area) and Hajalij (S) (Southern area). The four surveys utilised and combined in this study (Winkler, 1938; Rohl, 2000; Morrow & Morrow, 2002; van Craeynest, 2004) recorded nearly 4000 individual petroglyphs (animals: 2200-Figure 1, human figures: 859, boats: 884-total: 3943). All of the surveys found both riverine and desert animals represented in the rock-art, as well as many human figures engaged in hunting. They also noted the surprising presence of boat representations in the middle of the Central Eastern Desert-far from the River Nile and the Red Sea. An additional unexpected feature was the integration of some boat images in rock-art scenes showing people hunting with bows and dogs.



Map 1. The Central Eastern Desert showing the three areas: North, Central & South

This study outlines the rock-art of the Central Eastern Desert in a comprehensive manner, with the objectives of dating the images and suggesting reasons for the distribution of the petroglyphs and their creation. It begins in Chapter One with a history of the rock-art research carried out in Egypt, not only in the desert but also related efforts in the Nile Valley. From the Edwardian period (Weighall, 1909) to the 2000's (van Craeynest, 2004) a mixture of privately-funded and university based researchers have recorded petroglyphs in the desert. Whereas most surveyors have carried out work covering only parts of the Central Eastern Desert, the combination of the Eastern Desert (Rohl, 222) and Rock Art Topographical (Morrow & Morrow, 2002) surveys has provided a great deal of evidence ranging across the whole of the survey area. Together with the efforts of Winkler (1938) and van Craeynest, they provide as comprehensive as possible coverage of the Central Eastern Desert rock-art. Judd's (2009) synthesis of rock-art from the desert and the Nile Valley showed that although there are pharaonic era petroglyphs in both areas, the early images in the desert generally do not, with the exceptions of Hierakonpolis, El Kab and Silsila, have comparable examples in the valley. Explanation of this situation is undertaken here in chapters Seven (Distribution) and Eight (Interpretation). This demonstrates a close relationship between early desert rock-art and the core Naqada culture area between Abydos and Hierakonpolis, and that pharaonic era petroglyphs are probably related to routes to the gold mines, quarries and the Red Sea.

Chapter Two outlines the methodological issues and how problems regarding the identification of motifs and the construction of their typologies can be resolved. Most of the

petroglyphs (95%) are hammered, and fine detail is lacking. This is in contrast to the Saharan Rock-art (Zboray, 2005 & 2009; Holl, 2004) where most images are painted. Fortunately, there is only a limited repertoire of animal images and the human figures are mainly engaged in hunting or stand in boats. Indeed, the number of boat representations in which one or two large figures stand is a feature of the Eastern Desert petroglyphs. Therefore, the human figures can not only be classified by body type but also by the actions in which they are engaged. Constructing an informative boat typology has exercised a number of scholars (Engelmayer, 1965; Vinson, 1970, Červíček, 1974). Previous attempts have produced too many categories of types with too few boats in each. The solution proposed here is to use the five-fold system of 'Sickle,' 'Incurved Sickle,' 'Square,' 'Incurved Square' and 'Flared' from the RATS (Morrow & Morrow, 2002) publication (see Figure 3 below). This can be refined by comparing related motifs found in the desert to valley artefacts such as the C and D Ware, on which there are representations of boats. Then, a considerable number of the boat and other images can be dated stylistically by association with known motifs.

In Chapter Three the landscape and environment of the Central Eastern Desert are discussed, and the water, vegetation and mineral resources which supported and account for activity in the desert and the creation of the petroglyphs are examined. From observation of the Winkler, EDS and RATS sites plotted on a satellite map (Morrow & Morrow, 2002: 23) it is evident that the petroglyph sites are not distributed evenly. They tend to be concentrated in restricted portions especially of the west-east running wadis, and are rare near to the river and the Red Sea mountains. It will be noted in Chapter Seven (Distribution) that there is a pattern of clustering at and near side wadis, especially in the south of the survey area and in particular regarding early images. The period of the last six thousand years has seen progressive dessication (Brooks, 2004), but although large mammals such as elephant, giraffe and aurochs probably disappeared by the end of the Predynastic era (Linseele & Van Neer, 2009), smaller animals such as ostrich, ibex and gazelle have been present up to modern times (Manlius, 2001; Hobbs, 1989). We would expect to see evidence of this in the rock-art and must account (in Chapter Eight) for later examples of large mammals which are shown.

Chapters Four, Five and Six present the rock-art evidence: the animals, people and boats respectively, featuring their numbers wadi by wadi, their distribution, and while noting the challenges of dating the images does so as comprehensively as possible. We might expect desert animals such as ibex to be prominent in the rock-art and they do indeed constitute the largest faunal element. But the presence of grazing animals such as antelope and cattle, in

addition to some crocodiles and hippopotami must be explained, as must the rarity of gazelles-remains of which are prevalent in the Nile Valley (Lenseele & van Neer, 2009) and the absence of herd animals such as sheep and goats. Even more surprising are the combinations of climbers and grazers even with riverine animals, all in association with boats. There are also scenes of animals being ‘controlled’ with a rope or lasso, often in the middle of hunting scenes. Therefore, in many cases these are not representations of ‘real life’ either in the desert or the valley and will be explained by reference to artefacts found in the Nile Valley in a funerary context for the predynastic examples. Animal petroglyphs made in the pharaonic and Greco-Roman eras are likely to be related to trade or tribute.

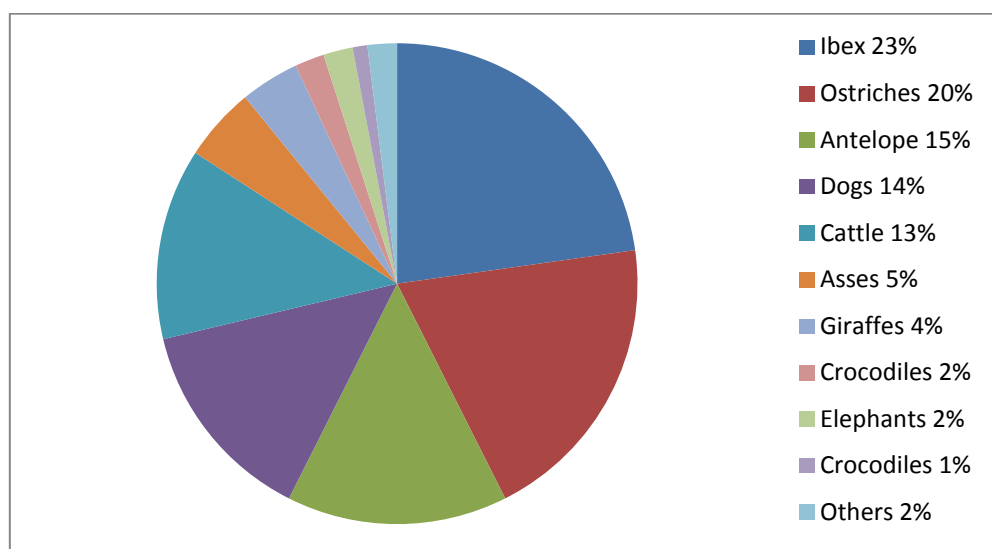


Figure 1. Animals by percentage of each species (total 2200)

Human figures in the Central Eastern Desert rock-art are generally neither carefully delineated nor portrayed in large groups. Some figures wear what appear to be feathers in their hair and carry a bow, while other weapons are extremely rare and scenes of conflict are only found in the period of horse and camel riders. The two predominant activities which they are portrayed engaged in are standing in boats and hunting. While the former activity is readily comprehensible in a riverine society, the latter requires further explanation as after the Badarian period the amount of food consumed gained from hunting was minimal (Lenseele & van Neer, 2009). Figures which are engaged in hunting and who stand in boats are often also associated with the enigmatic ‘arms raised’ figures. With their arms raised above the head and then incurved, they appear related to the examples seen rarely on C-Ware and more often on D-Ware pots almost invariably found in graves. In this study these early figures are explained as part of the way in which elite ancient Egyptians, especially in late Naqada I and

early Naqada II, ritually controlled the wild as part of their funerary beliefs. Pharaonic figures are much rarer and appear to be related to ‘Min’ and falcon shrines, and the ways to the mines, quarries and the sea.

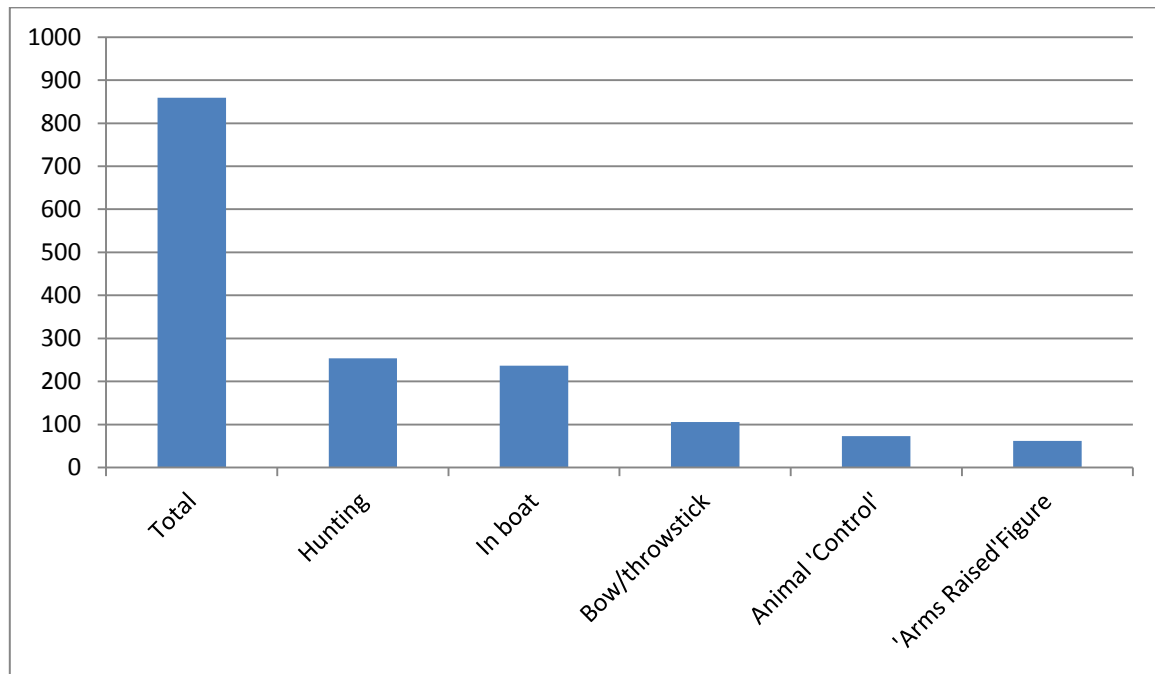


Figure 2. Human Figures by activity (Total: 859)

Representations of boats were particularly noted by Hans Winkler on the expeditions funded by the British industrialist Sir Robert Mond and published by the Egypt Exploration Society (Winkler, 1938). Winkler only operated in the northern section of the Central Eastern Desert, but acting alone with only a Bedu guide achieved an enormous amount as he recorded over fifty sites, including the prominent Site 26 in Wadi Mineh where five large plumed figures stand in a boat (and which is now an emblem of the Poznan Archaeological Museum). Winkler’s work was done at a time when explanations of Egypt’s cultural origins were powerfully influenced by diffusionism, and especially by the ‘Dynastic Race’ theory promulgated by Flinders Petrie (1920). Thus, Winkler identified high-prowed square-hulled boats as being Mesopotamian vessels rather than boats of the indigenous Naqada culture, which is the modern view. We can compare boats in the rock art stylistically with Nile Valley examples and date Naqada I, II, III and Old Kingdom to Greco-Roman vessels.

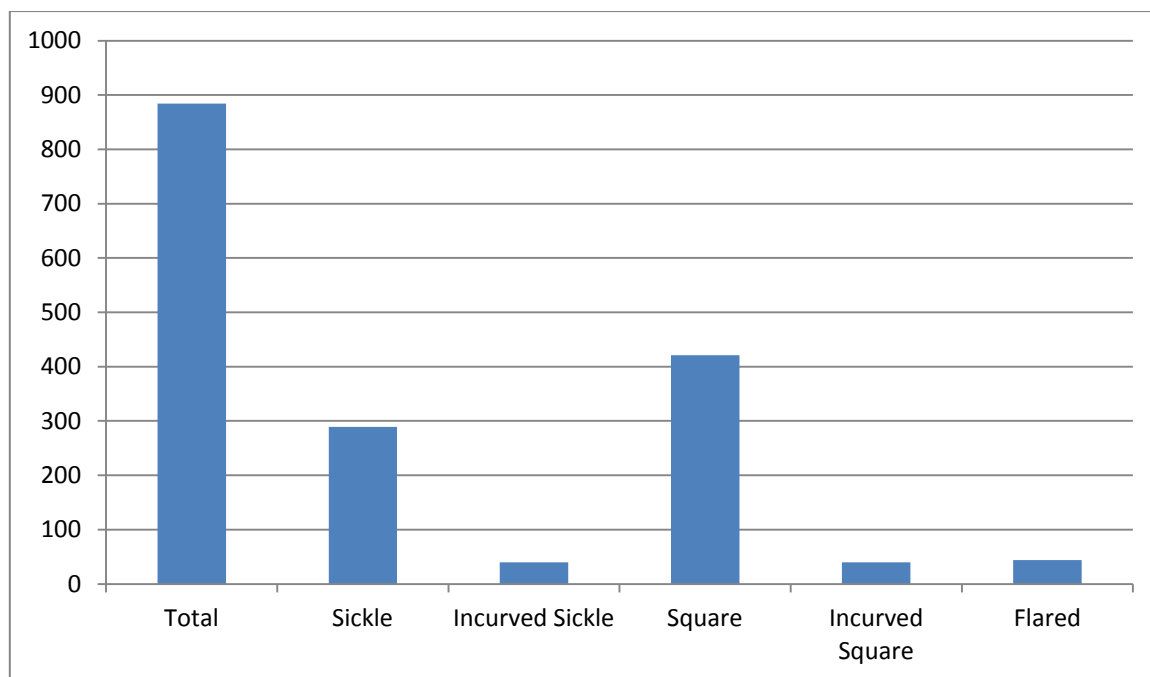


Figure 3. Boats by type (Total: 884)

Chapter Seven relates the images to their position in the landscape and summarises the character of the rock-art in the southern, central and northern areas of the Central Eastern Desert. Hitherto, the lack of a comprehensive corpus has prevented an overall view of the distribution of the petroglyphs. By dating a considerable number, we can see which wadis were marked in which period and trace some routes through the desert. By this means we can see that the Wadis Hammamat which run directly to the Red sea were both used over a wide period of time, but that rock-art activity is concentrated in both of them around side wadis and areas which even today have vegetation and acacia trees. It is also clear that petroglyphs in general, and boat images in particular, are more likely to be predynastic in the south. Indeed, in the southernmost wadis they are overwhelmingly early and the ratio declines the more northerly one goes until early and late vessels are roughly balanced in Wadi Hammamat (Figure 4). There is also a hiatus that appears between north and south in the predynastic period. Within this pattern, not every southern west-east wadi has predominantly predynastic motifs as Abu Mu Awad breaks the pattern and delineates a route to the gold mines to the north-east of this wadi. This will be seen to demonstrate the pattern of predynastic petroglyphs largely representing hunting grounds, and dynastic images describing routes to the mineral resources of the Eastern Desert.

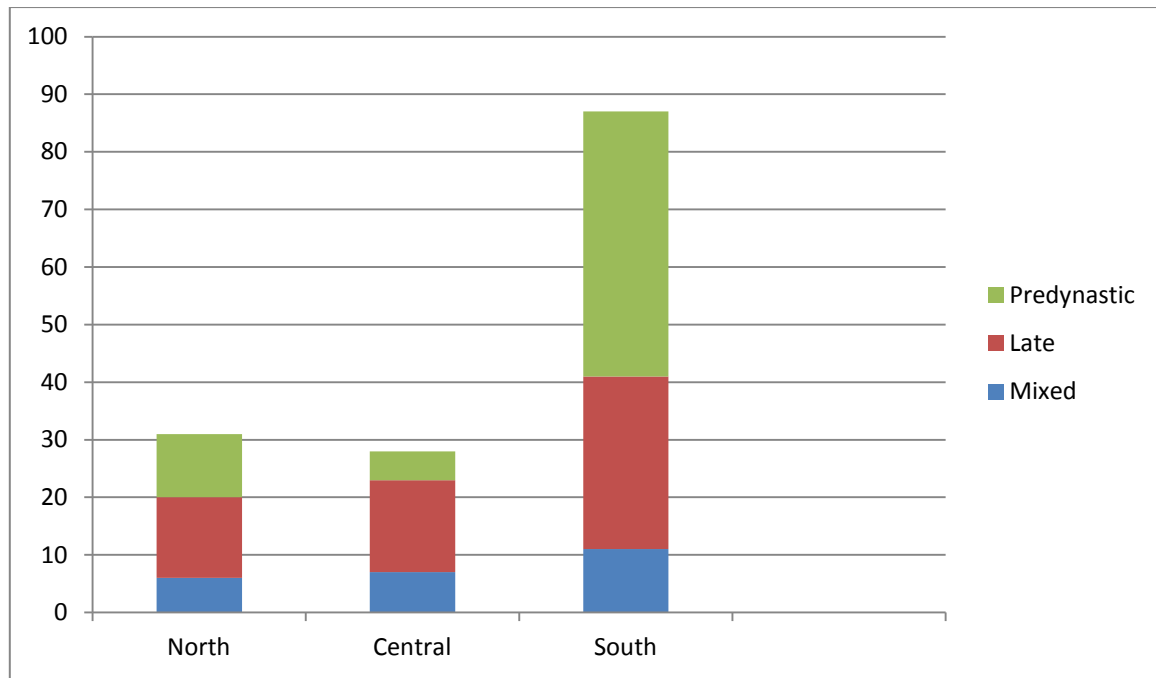


Figure 4. Distribution of sites by date-Predynastic=Naqada I/II, Late=Pharaonic & Greco-Roman, Mixed=elements of both periods present

Chapter Eight suggests reasons for the creation of both predynastic and pharaonic images and in particular attempts to explain the combinations of animals, boats and the ‘arms raised’ figures in integrated scenes in the predynastic era. In doing so it explores the ritual power of these scenes. For many years scholars had to rely on Winkler’s 1930’s publication, and pioneering and valuable as this was it was also partial. Most of the scenes in which boats, and often ‘arms raised’ figures, are integrated into hunting scenes are located in the southern sector of the survey area covered by Rohl (2000) and Morrow & Morrow (2002). Although the ‘Dynastic Race’ theory articulated by Petrie has been discarded, it is tempting regarding the early petroglyphs to read back respectively from the dynastic era to look for origins of pharaonic religious and ideological themes in the rock-art. In this thesis I work synchronically from the Central Eastern Desert petroglyphs and link them with the Naqada culture in the Nile Valley to establish a link with funerary practices, as evidenced particularly at Hierakonpolis and Mahasna. Regarding the dynastic to Greco-Roman period images, I trace the routes through the desert to the sources of much-desired gold and other minerals, and to the Red Sea.

Chapter One

History of Research

1 Introduction

Egyptian rock-art has often not occupied a prominent position in world rock-art studies and in public perception, although the situation is improving as will be seen below. Clottes (2002) lists fifty-four parts of the world with notable rock-art sites; including Saudi Arabia and Sinai, but Egypt is a blank. Not even the Gilf Kebir is shown. The *Cambridge Illustrated History of Prehistoric Art* (albeit published in 1998), also has no entry for Egypt. Coulson and Cambell (2004) do show a full page photo of a site near Kanais Temple, but with no examination at all in the text. For Le Quellec (2004), Egypt is also not seen as part of Africa and is not even mentioned. One reason for this lack of coverage may be the perceived 'low quality' of Egyptian rock art compared with more visually appealing examples from Tassili, South Africa, and the Palaeolithic European sites. The Saharan rock art is mainly painted, whereas that of the Eastern Desert and Nile Valley is pecked or engraved and has not attracted the attention of art historians. The success of the film 'The English Patient' (1996) has reawakened interest in the pioneering work of Almasy, Bagnold and Winkler in the Gilf and Uweinat, but not extended interest east of the Nile.

The lack of interest in Egypt by many rock-art specialists is often mirrored by Egyptologists, who, understandably, are usually mainly concerned with excavating Valley and Delta sites. The American expedition at Hierakonpolis, the Theban Desert Road Project and the Dakhla and Kharga oasis projects are notable exceptions. However, they operate north and west of the Nile, away from the densest concentration of approximately three hundred petroglyph sites in the Eastern Desert wadis. Archaeology in the central Eastern Desert concentrates on the Roman period, mainly in the quarries near the Red Sea and is limited by military restrictions (Sidebotham et al. 2008). Only a French team working at Daydamus Fort is in the

Eastern Desert rock-art survey area, but has been uninvolved with the nearby petroglyph sites (Judd, 2007:15).

In Africa as a whole it is hunter-gatherer, and especially San and Saharan rock-art, which has been at the centre of recent attempts at interpretation. From the mid-1990's David Lewis Williams' exploration of images associated with entotics, culminating in *Mind In The Cave* (2002), consolidated shamanism as a major, if not exclusive explanation of much rock-art generally. The Palaeolithic sites of Lascaux and Altamira have gained renewed attention and popularity after explanation in terms of shamanism. Although the journal *Archeo-Nil* has an extremely useful yearly bibliography created and updated by Stan Hendrickx, which has references dealing to some extent with Egyptian rock-art, there have been, until comparatively recently, few recognisable rock-art specialists in the field of Egyptian Archaeology.

1.2 Previous Research into Egyptian Petroglyphs

1.2.1 Weigall and Winkler

A review of previous research into rock-art from the Predynastic onwards is necessary in order to provide an overview of the entire corpus, to determine gaps in the previous research and issues arising from it. The first serious recorder was Sir Arthur Weigall (1880-1934). In 1907, as Inspector of Antiquities, he trekked by camel along the Wadi Hammamat, noting the rock with many images at Qasr Al Banat, later to be Winkler's Site 1. The following year he recorded and published many of the petroglyphs near the rock-cut temple of Seti I at Kanais. His method of depiction and infilling of line drawings has been followed by succeeding recorders. However, this discovery was overshadowed by the much more glamorous work being done in the Valley of the Kings and attracted little interest. Nor did Weigall attempt any detailed analysis of his findings, his publication amounting to a travel log with some illustrations.

The Kanais petroglyphs were re-recorded by Leo Frobenius in 1927 as part of the Eighth German Institute Interior Africa Expedition (DIAFE) in Upper Egypt, Lower Nubia and the northern Etbai region. However, most of the images remained forgotten in the Frobenius Institute archives in Frankfurt am Main until Pavel Červíček later studied them for his doctoral thesis. But it was Hans Winkler (1900-1945) who

carried out the first systematic exploration and recording expedition in the Eastern Desert. After private visits in 1932 and 1934, he was employed on the Robert Mond Expedition (RME), a first book in German appearing in 1937 and the Egypt Exploration Society publishing what was intended to be a preliminary publication in 1938. In 1937 Winkler identified five different peoples in the rock-art according to style and subject: 'Wedge-shaped people,' 'Dirwa' hair people, 'Penis sheath' people, Invaders from Mesopotamia because of their association with square-hulled boats who wore feathers in their hair, and Naqada II people. Writing up his RME surveys, in 1938 Winkler rearranged these categories into four: 'Earliest Hunters,' 'Autochthonous Mountain Dwellers,' 'Eastern Invaders,' and finally 'Early Nile Dwellers,' combining 'Wedge-shaped,' 'Dirwa,' and 'Penis-sheath Peoples' into one category and adding a new 'Earliest Hunters' category. Although he had colour cards to record comparative patination, Winkler did not make much use of this method and indeed warned of the pitfalls of dating by it. His inability to date the petroglyphs satisfactorily and reliance on 1930's ideas of a culturally superior master race invading Egypt to initiate a 'high' civilisation, detracted from the significant accomplishment of his extensive surveying, although the 'Dynastic Race' hypothesis was established thinking at this time (Petrie, 1920; Silberman, 1999). Winkler was prevented from continuing his survey work by the outbreak of the Second World War and was killed in 1945 during the course of it. Fortunately, since then others have built upon his work.

1.2.2 Further study and Resch's reassessment of Winkler

From 1929 to 1939 John Dunbar worked close to the Nile, conducting twenty-five surveys between the 1st and 2nd cataracts (Dunbar, 1941). These included Toshka with its proximity to the comparatively recently discovered early cattle-herder encampment at Nabta Playa. He found a wide variety of petroglyphs ranging from predynastic to dynastic times. Unlike Winkler's sites, he found that it was unusual in this area to find petroglyphs more than a few hundred yards inland. Walter Resch (1963) dissected Winkler's conclusions. He maintained that hunters would not have lived in the Central Eastern Desert during the alleged dry period before the first cattle-herders arrived, that square-hulled boats originated in the Nile Valley, and that the practice of wearing feathers in the hair was an Egyptian and Nubian but not Mesopotamian

tradition. Resch also carried out his own surveys in the Wadi Baramiya area and published a volume mainly of illustrations (Resch, 1967), some of which Červíček included in his 1974 volume. He therefore threw considerable doubt on many of the assumptions underlying Winkler's work.

1.2.3 The UNESCO rescue archaeology recording teams

From 1961 to 1964 international teams co-operated to record rock-art which was to be flooded due to the construction of the Aswan high dam. The Spanish Comité Español de Excavaciones Arqueológicas en el Extranjero worked in an area straddling the Egyptian and Sudanese borders from Nag Kolorodna to Kasr Ibrim from 1964 to 1966 (Almagro & Almagro, 1968). They found petroglyphs attributed to dates from Naqada I to Dynastic times, but a higher proportion of engraved to pecked images than in the Eastern Desert. More naturalistic animal representations, cows with udders (rare in the Central Eastern Desert Survey/Rock Art Topographical Survey areas) and with body markings were noted. In addition, they did not find examples of 'arms raised' figures (for a recent revision of the work see Fraguas, 2006).

Other international groups involved in the rescue archaeology were the Joint Scandinavian Expedition (Hellström and Langballe, 1970) and an East German team, who were subject to the same political constraints as their Czech colleagues and could not publish their recordings until much later (Otto and Buschendorf-Otto, 1990). The Scandinavians included material collected by Oliver Myers in the Abka area in 1947-48. Arising out of the 1963/4 work in the same area covered by Dunbar a Czech team, also sponsored by UNESCO, surveyed there with Pavel Červíček completing the expedition catalogue (Vahala & Červíček, 1999). The East-West division of Europe had prevented co-operation between European colleagues. Except for that of the Madrid team, the work published was in the form of catalogues with very little interpretation.

1.2.4 P. Červíček's reworking of Winkler

Pavel Červíček, who published the 8th DIAFE recording, also visited Winkler's work, examining many of his expedition notes and diaries. Červíček concluded that 40% of the petroglyphs lie in the Wadi Hammamat and surrounding areas and that not more

than 20% are found in the Nile Valley between the 1st and 2nd cataracts. He placed less than 10% in the Nile Valley north of the 1st. cataract, with less than 1% in the Nile Valley close to the 2nd cataract (Fuchs, 1989: 149). Červíček classified boat petroglyphs into types, published more of Winkler's plates, and produced a chronological framework divided into six 'horizons.' A: 4000 BC- B: 2100 BC-C: 1400 BC-D: 1050 BC-E: 250 AD and F: Post 250 AD. He concluded that, "most rock pictures are works of religious art" and that most of the A and B horizon petroglyphs, "represent fixed, apparently canonised motifs" (Červíček, 1989: 89) Červíček used Naqada II archaeological remains, mobiliary art, and vertical stratigraphy of palimpsest panels to interpret the images. He termed this approach 'isochronological,' interpreting rock art by reference to the historical period concerned. He assumed that ideas in early dynastic culture and in the Pyramid Texts had their origins in prehistoric times, identifying sacred barques, great goddess figures a male deity with feathered headdress, a bovine cult, a divine triad and sandal prints representing the power of the king. Therefore, B Horizon rock art represented, "the religion of the Naqada culture and of the A Group in which anthropomorphical gods appeared" (Červíček, 1989: 90).

Struck by the boat petroglyphs, Červíček stated that they were, "the most important motif cluster of the B Horizon" (Červíček, 1989: 80) and noted their presence not only in the Eastern Desert, but at El Kab, Nubia and the Kharga and Dhakla oases. He was confident that his Type 1 boats; sickle-shaped, could be identified with divine barques on Naqada D-Ware and also with vessels from dynastic times. Type 2 square-hulled boats were supposed to indicate Mesopotamian influence, whereas the portrayals in the rock-art actually predate the Mesopotamian cylinder seals by up to a thousand years. Type 4 incurved boats were examples of the barque of Re. Červíček was drawn to this kind of interpretation, not merely by evident stylistic parallels, but because of the lack of an informed basis for analysis. He rejected hunters' magic or a farmers' fertility cult as an explanation because, "observations they are based on have nearly always been made as late as the last two centuries" (Červíček, 1989: 74). He could not find any insightful ethnological model outside of Winkler's to examine the social background of the rock art makers. Arising from this, it is necessary to further examine to what extent stylistic parallels in the Naqada culture can be used to date

and interpret the rock-art and whether it is valid to read back themes from the historical period into the prehistoric era.

1.2.5 Fuchs in Wadi Baramiya

Little work was done in the ensuing decade (1980-90). The exception was Donald and Susan Redford's (Pennsylvania State University) 1984-86 effort. However, this was confined to recording some sites in the Wadi Hammamat without much interpretation (Redford & Redford, 1989). The next person to deal in detail with the Central Eastern Desert rock-art and build on Resch's work was Gerald Fuchs. He surveyed in the single Wadi Baramiya, but also reviewed the current state of the petroglyph evidence. Fuchs noted the difficulty of establishing a chronological framework, and that maps of rock-art sites hitherto reflected itineraries of expeditions and were therefore unlikely to show the real distribution of sites or their numbers. He concluded that 85-90% of the petroglyphs are located in the Nubian Sandstone area and proposed that their distribution "depends primarily upon the availability of suitable rock" (Fuchs, 1989: 149). He suggested that Nile Valley affinities explain much of the distribution and that geology does not determine the overall pattern. In his opinion, the absence of sites near the Red Sea could represent a cultural and perhaps territorial boundary. Fuchs surveyed the Wadi Baramiya and adjoining wadis in the 1980's and established eleven sites, although he did not publish a detailed catalogue. He usefully employed the site naming system of a prefix WB and a serial number plus co-ordinates, rather than Winkler's numbering consecutively as he encountered new sites.

Winkler often referred in his notes to the presence of vegetation even thousands of years after the petroglyphs were created. Fuchs surveyed climatic data and judged it inadequate. He asked if data from the Western Desert, today a hyper arid region, and the Eastern Desert where precipitation struggles to reach 70-100 mm a year, could be used to reconstruct the climatic conditions of Egypt in a moister phase five thousand years earlier. Fuchs paid more attention than previous writers to the flora and fauna evident in the rock-art, but was cautious about reconstructing climatic conditions from faunal assemblages. He argued that these could be complicated by five factors. Firstly, there are problems of dating accuracy. Secondly, the fauna depicted cannot be expected to form a representative sample (e.g. sheep and goats are rarely represented

in the fauna but must have been economically important). Also, species considered to be characteristic for different 'periods' (i.e. giraffes, cattle) may have existed in a similar environment and even at the same time. In addition, animals depicted at a particular site could include species from another environment. Finally, representations from a site need not be typical of its immediate surroundings (Fuchs, 1989: 150). The presence of riverine animals such as crocodiles and hippopotami in the rock-art, in addition to boats, indicate connections between the desert dwellers and Nile Valley dwellers-if, indeed, they were distinct peoples at all. Fuchs suggested that the 'arms raised' figures were a dancing pose and, "seem to indicate the deformed horns of a cow (?)" (Fuchs, 1989: 151), and agreed with the interpretation (by Červíček) that they were the deity later identified with Hathor. It is notable how many bracketed question marks there are in Fuchs' 'Selected Motifs' section. The main problem with his attractive, apparently self-evident intuitive connections to later pharaonic iconography is that they have no evidential 'golden thread' and need to be replaced with a more effective, objective approach looking at the petroglyphs in context to avoid slanting the conclusions.





Fuchs' recording efforts were impressive and his site naming system was later taken up by the Rock Art Topographical Survey (Morrow and Morrow, 2002). Regarding site distribution he concluded that the number of sites declines the further east one moves in the wadi system and that there are practically no sites on the Red Sea (except near Berenike). 90% of the petroglyphs are in wadis which drain into the Nile Valley, while 85-90% of the petroglyphs are located in the northern sandstone area. Finally, the petroglyphs' frequency diminishes greatly as one goes from north to south (Fuchs, 1989: 150) Fuchs' conclusions about the rock-art's distribution within the Eastern Desert wadis are generally accepted by those engaged in ongoing research. Preferred sites lie in main (east to west) wadis along what were routes to the Red Sea coast (but see Wadi Atwani) and especially inside wadi bends, which are the travellers' most direct route. Additionally, they tend to be at or near ground level (contra Davis, 1989-but see Kanais and Winkler's Site 14) and are often in rock overhangs or shady spots (Fuchs, 1991: 61). Although he intended to continue surveying, Fuchs did not return to the Wadi Baramiya.

1.3 Renewed surveying inspired by Winkler

1.3.1 The Eastern Desert and Rock Art Topographical Surveys

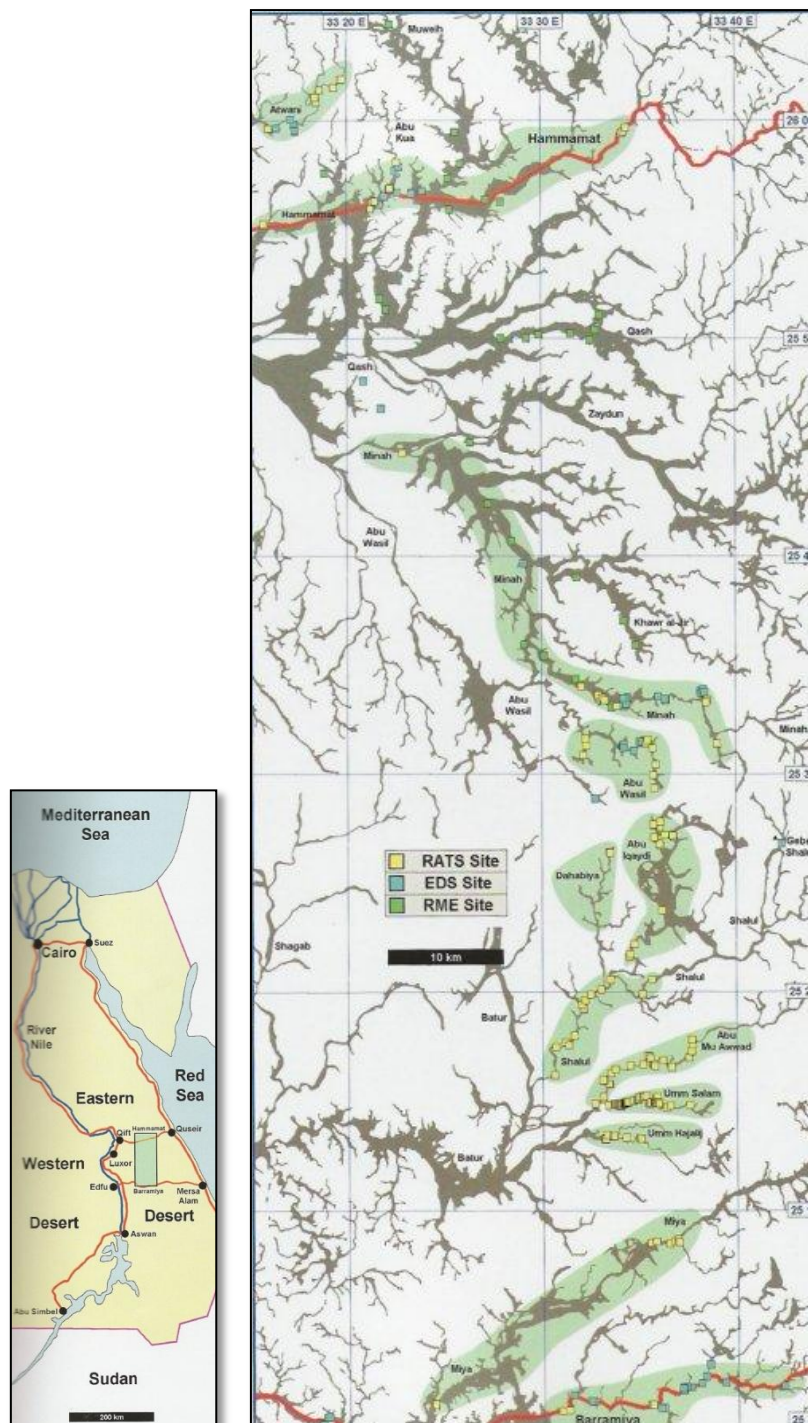
Beginning in 1997, David Rohl, who was seen as the leader of ‘amateurs,’ but with an Archaeology first degree from University College London, began the Eastern Desert Survey covering the southern Wadis Baramiya, Umm Hajalij (S), Umm Salaam and Kanais as well as re-recording twenty of Winkler’s sites. Four four-day investigations produced the EDS vol.1 (2000), the ‘Followers of Horus.’ Without his initiative a comprehensive view of the Central Eastern Desert petroglyphs would not have been possible. Working in an area from 25° 59.59’N/33° 17.33’E covering the areas previously covered by Weigall, Winkler and Fuchs, Rohl’s teams recorded a hundred and forty-six ‘sites,’ including four of Fuchs’ and fifteen of Winkler’s RME, publishing considerably more detail concerning these sites (Maps 1 & 2).

Sites in the EDS publication were designated by letters corresponding to the finder, which gave no indication of the wadi concerned. This situation was remedied in the subsequent Rock Art Topographical Survey, using many of the same personnel and operating in the same area, but under the supervision of Toby Wilkinson (University of Cambridge). Fuch’s system of itemising the wadi sites was utilised. Each wadi was given a three-letter identification, with individual sites numbered from west to east, wadis being listed in north to south sequence. New sites were interspersed with some from previous publications, and now need to be properly integrated with the system. The RATS team defined a site as, “in general a series of petroglyphs in the same physical location separated by at least 50 metres from another such grouping” (Morrow & Morrow, 2002: 14). GPS co-ordinates and the plotting of RME, EDS and RATS sites on satellite images of the area made for a comprehensive and easily accessible publication. The Eastern Desert Survey (EDS) and Rock Art Topographical Survey (RATS) took place over four years from 1997 to 2001. Importantly, the three EDS expeditions and the three RATS teams recorded 120 new sites between them. Recording sheets were utilised, petroglyphs measured and slide photo archives of over 5,000 images built up. Continuity in recording techniques was enabled by Peter Cherry, a leading participant in the EDS, who prepared and standardised the recording sheets (see Figure 1).

Egyptian Eastern Desert Rock Art Survey (Sample Form)											
Site Location											
GPS Co-ordinates:				N 25 59 54	Survey Site Number: DR-8						
				E 93 17 46	Other Site Nos: RME 100						
Orientation (Facing Direction):				SE							
Location Description:				WADI ARRADA. 500 METRES ALONG ON NORTH SIDE OF SMALL UNNAMED WADI RUNNING NE FROM MAIN WADI ARRADA, ABOUT 4 KM EAST FROM ITS JUNCTION WITH WADI BAHIRA.							
Site Description:				LARGE HOLLOW IN AN OBVIOUS SANDSTONE CLIFF FACE WITH TWO MASSIVE BOULDERS IN FRONT AND TO RIGHT HAND SIDE. ROCK ART ON CLIFF FACE TO LEFT SIDE OF HOLLOW.							
Site Width (Metres):				6	Height Above Wadi (Metres)		Bottom:	3	Top:	6	
Photographer:				D. BAILEY		Film Nos:		5 & 6		Photo Nos:	34-36 & 1-7
Recorder:				THOTH		Team:		1		Date:	25/12/99
										Time:	13:30
Boats (Enter a number or a tick if present)											
		Sickle		Incurved Sickle		Square		Incurved Square		Other	
											
Number		1				2		1			
Figures - Large											
Crew - Small											
Oars - Rowing											
Oars - Steering											
Cabins											
Mast/Totem Pole											
Pennants											
Sail											
Towed											
Figures (Enter a number or a tick if present)											
		Number		Raised Arms		Clothing		Head Plumes		Penis Sheath	
		Bull's Tail								Other	
Male		11									
Female		1								♀ MAN WITH DUAL CROWN	
Weapons (Enter a tick if present)											
Bow		Club		Mace		Staff		Throw Stick		Lasso	
Animals (Enter a tick if present)											
Elephant				Bull/Cow				Ostrich			
Giraffe				Ass				Falcon			
Hippopotamus				Camel				Bird			
Lion				Dog				Other			
Antelope/Gazelle				Horse							
Ibex				Crocodile							
Inscriptions (Enter a tick if present)											
Hieroglyphic		Greek		Latin		Arabic		Misc. Signs		Other	
Other Observations											
TWO SQUARE BOATS BEING TOWED. MAN LASSING HIPPOPOTAMUS! MAN CARRYING HEKA STAFF AND PERHAPS WEARING DUAL CROWN. MANY OTHER INDISTINCT AND OVERLAID BOATS.											

Please turn over and draw rough sketches of boats and other important features.

Figure 1. Survey form used by the EDS and RATS recording teams, courtesy of David Rohl



Maps 1 & 2. Location of the RME, EDS & RATS sites in the Central Eastern Desert, after Morrow & Morrow, 2002

Rohl was inspired by his experience at UCL to survey the Eastern Desert and had been attracted to the rock-art of the Central Eastern Desert partly because of the concentration of boat motifs. When he became a partner in an independent travel company, with his contacts through UCL and the Sussex Egyptology Society, he gained the volunteers and funding to undertake surveys in the Eastern Desert in the

areas covered by Weigall, Winkler and Fuchs as well as new wadis. Starting with a single vehicle in early 1997, Rohl used local drivers, vehicles and support staff, and survey team members paying their own way in order to finance the work. Each survey team camped four nights in the desert, entering from the Edfu-Mersa Alam road and leaving via the Wadi Hammamat to Hurghada, using Winkler's 1938 map to relocate sites and find a way through the wadis. The use of modern off-road capable vehicles aided coverage of a wide area considerably, but reduced the amount of walking done. The November 1997 expedition aimed to re-record Winkler's Site 26 (WAS-10) in the Wadi Abu Wasil, but found the southern access blocked by a rock-fall and sand dunes. It did, however, undertake a survey of the petroglyphs Weigall had located at Kanais and found entirely new sites in the Wadi Umm Salam which had never previously been located and recorded. The February 1998 expedition recorded further in the Wadi Umm Salam and relocated Site 26. It also re-recorded this and other RME sites, including the Wadis Atwani and Hammamat in the northern section of the Central Eastern Desert near Bir Laqeita. In December 1999 a comprehensive re-survey of these sights was undertaken, of which this author was again part, in preparation for publication in 2000.

Further expeditions were planned and continued under the auspices of the company in which Rohl was working and had a financial interest, Ancient World Tours. Rohl intended to publish an EDS Volume 2. But he relinquished editorial control to Morrow and Morrow, who had been members of the November 1997 and December 1999 surveys. Surveys were undertaken in October and December 2000, and February 2001. They were directed by Dr. Toby Wilkinson (University of Cambridge) whose first experience of the Eastern Desert had been in 1999. This work was published in 2002 under the title *Rock Art Topographical Survey in the Eastern Desert of Egypt* (RATS). The EDS and RATS used the Egyptian Survey Authority 1:50,000 scale New Topographic Map (1995) based on the 'Old Egyptian' datum-the Helmert 1906 Ellipsoid and positions were plotted using hand-held GPS in degrees and minutes/percentages of minutes in the OED, once the US scrambling system had been disabled. Rohl notes "It would have been extremely difficult to relocate Winkler's sites or even navigate the complex terrain of the Eastern Desert without satellite navigation technology and these excellent maps" (Rohl, 2000: 9). Both EDS and RATS covered generally the same areas, but the RATS surveys extended work

along the whole length of the Wadi Umm Salam, begun by Rohl, and into new wadis, the neighbouring Umm Hajalij (North) and Abu Mu Awad, thus covering all the main wadis.

The EDS and RATS usually employed three or four vehicles with a team of four or five surveyors. Each team had designated recorders, a photographer and sketch artist. Given the four day time limit and the maximum occupation of one campsite for two nights, the photographers could not wait for perfect lighting conditions. These are typically when the sun is low and casts a shadow over shallow incisions. This inevitably compromised quality, so in the RATS volume the authors decided to digitally enhance some images. Individual details such as boats and outstanding figures were sketched. Site orientation, date, and time recorded were included. In addition, figures, weapons, animals, inscriptions and site height above the ground were recorded, which has allowed classification into 'Low,' 'Medium' and 'High' sites here (see Chapter Seven). Recording of patination was limited to 'Light,' 'Medium' and 'Dark,' and method of incision to pecked and scratched, an improvement on the EDS volume where there is little detail. Sites were plotted on to schematic wadi maps in both the EDS and RATS publications, but Morrow and Morrow entered plots on NASA MrSID satellite images of the Eastern Desert, including the RME and EDS sites. A drawback is that, although the EDS and RATS sites are indicated, there is no united numbering system.

The EDS and RATS publications have been criticised by some professional Egyptologists, among them Dirk Huyge (2002a), for incomplete inventories, no details on technique, having few dimensions and lacking scale in photos. Many of these details are in the original recording sheets and omissions were probably caused by the desire for a relatively fast turnaround from first work to publication of only two years. The EDS team have further material from new sites south of the Wadi Baramiya from three further expeditions conducted under the auspices of the University of Minnesota in which they located more than fifty new sites (Judd, 2009). These need to be published with Huyge's comments in mind. The material is reported to include fewer boats than in the EDS/RATS area (65 boat images recorded by Judd, 2009), but also a large proportion of cattle. The EDS and RATS work provides a useful corpus to examine patterns of movement through the wadis indicated by the

rock-art's distribution and whether different artistic conventions are identifiable. Much attention has understandably been drawn to the presence of boat drawings many miles from the Nile, and the feathered figures as well as the presence of cattle. In addition, it is necessary to see if the distribution of cattle, boats, figures and other animals is related to certain areas.

1.3.2 Additional Surveys: Wadi Baramiya, El Hosh, 'Dominion Behind Thebes,' Bir Mineh, Aswan and Hierakonpolis

In 2004 Aude van Craeynest undertook a three-day recording expedition in the Wadi Baramiya. She recorded thirty-two sites, including twenty-one new ones not covered at all by Fuchs, Rohl or Morrow & Morrow. This was an individual initiative undertaken under the auspices of the Institute of Archaeology for a Masters qualification. Van Craeynest interpreted the images in terms of the precursor of dynastic sacred barques and deities such as Hathor, and identified many of the petroglyphs either as representing hunting activities or the conduct of funerary rituals (van Craeynest, 2004).

Additional work by the Belgian team from the Royal Museum of Arts and History in Brussels has taken place at El Kab, a significant site due to its proximity to the Nile and one of the important early Nile settlements. Eleven sites with five hundred images, three hundred assigned to the period 3650-2650 BC, have been recorded with the others covering a wide period into the Islamic era. 52% of the rock-art was assigned to Horizons 1 and 2 (out of seven) covering the Naqada I to III and early dynastic periods (Huyge, 1995). The corpus includes giraffes, ibex, asses, boats and five 'arms raised' figures, but no cattle (in the early horizons).

John Darnell has made an important contribution to Egyptian rock-art as part of nine seasons' work of the Theban Desert Road Survey in the 1990's. The recording of pharaonic inscriptions at Djebel Tjauti and 'Dominion Behind Thebes' was extended to prehistoric rock art. The high standard of Darnell's recording should act as a model and his warning that, "location has a greater effect on the patination of an inscription than does age" (Darnell, 2002: 7) is particularly apt. Darnell recorded several of

Winkler's west bank sites, in addition to new ones, including the so-called 'Scorpion Tableau' at Gebel Tjauti.

John and Deborah Darnell collaborated in recording and excavating sites further to the west, such as the 'Cave of the Wooden Pegs' in the Wadi Rizeiqat in the Western Desert. Not only does this site have boat petroglyphs, but also Badarian RB27T, late Naqada I, Naqada II and some Naqada III sherds. This association of archaeological remains from a dig with petroglyphs is unusual and does not occur in the Eastern Desert. At the 'Cave of the Hands' and 'Predynastic Feature' a towed boat, roped giraffes (again with the interpretation as sun-bearers) elephants, and 'arms raised' figures were reportedly found, in addition to Tasian and Badarian pottery. The Tasian culture is seen as that of desert dwellers and examples have been found in the Eastern Desert. Deborah Darnell's conclusion is that, "the desert dwellers, the Abkan and the A Group seem to belong to one cultural tradition most likely originating in what is now the Sahara Desert" (Darnell, 2002: 159)

The recent publication of a multi-disciplinary Hungarian team's work around Bir Mineh (1998-2004) came too late to be included in this thesis. The well, and some remains of dry stone walls and buildings, lie beyond the sandstone escarpment outside of the EDS/RATS survey area. The team did find approximately 400 petroglyphs which appear to mainly consist of desert fauna such as antelope and ibex (Luft, 2010). A few boats were recorded, but none in the 'Integrated' scenes of boats, hunters and 'dancers' which will be dealt with in this study.

Under the auspices of the Geological Survey of Norway and Conservation Science Consulting Sarl, Fribourg, Switzerland, Per Storemyr is surveying the hinterland of Gharb Aswan by the first cataract opposite modern Aswan. 250 panels with 1500 mostly pecked images have been recorded, including a re-recording of Winkler's Site 53 with geometric images, and he is exploring a connection between depictions of giraffe associated with them (Storemyr, 2009). Storemyr has found images from the Epipalaeolithic to the New Kingdom, including predynastic boats and only the second example of a vessel with a canine standard (Storemyr, 2009: 127) the other being near Gebel Silsila (Červíček, 1974, abb. 241).

Since 2005 the Aswan-Kom Ombo Archaeological Project has been investigating areas between these two towns, particularly the West Bank from Qubbet al Hawa north to Kubbaniya north, Wadi Kubbaniya, Wadi Abu Subeira and a section of desert south-east of Kom Ombo. The team, led by Maria Gatto and Stan Hendrickx recorded boats, bovids and hunting scenes, most dated to the Predynastic at Gebel Qurna and Khor Abu Subeira South. They have also re-located a late predynastic/early dynastic scene at Gharb Aswan showing a figure wearing a 'white crown' accompanied by a fan bearer and two standard bearers with 'Wepwawet' and another standard. Another expedition whose work should prove useful in integrating the study of Egyptian petroglyphs with Egyptian history is the American concession at Hierakonpolis. Although this has mainly been concerned with digging the predynastic sites and in conserving the so-called 'fort,' (a ceremonial enclosure probably constructed in the reign of the last Second Dynasty king Kasekhemwy), the team located petroglyphs of boats with 'fronds' at HK 61 in Wadi Abu Sufian in the desert west of the town. Fred Hardtke from Macquarie University, Australia, is currently engaged in a systematic survey of the petroglyphs. Since this work is being done in tandem with an archaeological dig, a rarity in Egypt, this will make an extremely valuable contribution to the overall study of Egyptian petroglyphs.

1.4 Conclusion

Recording the rock-art of the Egyptian Eastern Desert has moved through several phases. The initial impetus was the pioneering efforts of the privately-funded RME Winkler expeditions which covered the northern and north-central area, tragically cut short by the recorder's death near the end of World War Two. University scholars such as Resch, Fuchs, the Redfords and van Craeynest did valuable small-scale work in Wadis Hammamat and Baramiya. But it was the combined efforts of the EDS and RATS teams, ranging over all of the Central Eastern Desert, which provided much new information. They crucially completed the location of petroglyphs in the southern and central wadis which had previously never been surveyed and recorded more than 120 new sites. This work enabled a comprehensive corpus of the petroglyphs to be compiled as the basis for this study. Therefore, the contribution of the 'amateurs' in this area has been substantial.

The UNESCO rescue operations in Lower Nubia in the 1960's produced a considerable amount of rock-art from the Nile Valley which Judd (2009) has shown has few affinities with the Central Eastern Desert petroglyphs. The ongoing recording in the Egyptian Nile Valley will provide comparison and context for the desert rock-art. Some of the petroglyphs, especially in Wadi Abu Sufian at Hierakonpolis, are likely to date from the same period as those in the EDS/RATS survey area (see Chapters Seven and Eight). Other sites, such as at Gebel Tjauti and near Aswan, appear to be later: early Naqada III and the First Dynasty. Together with the previous work of the Belgian team at El Kab, this presents the opportunity to create an overall picture of Egyptian rock-art and to place the Eastern Desert material in context. Observations regarding the progress of the expansion Naqada Egyptian culture, as well as comment regarding the motivation for pharaonic motifs are therefore made in the conclusion to this study.

Chapter Two

Methodology

2.1 Introduction

This chapter aims to explain the overall methodological approach taken in this thesis. It assesses the work of the surveys combined into the corpus, creates classification schemes for the animal, human and boat petroglyphs, and devises a dating system in order to establish the function of the rock art and to explain how it fits into the world view of predynastic and dynastic Egyptians. Firstly, I describe how the corpus of rock-art motifs was put together, focusing on the reliability of the surveys and data sources. I also propose solutions to problems of identifying and classifying the Central Eastern Desert images. Next, I outline my approach to creating typologies for the animal, human and boat petroglyphs. Following this, difficulties in utilising methods of dating are explained and stylistic dating relating the petroglyphs to Nile Valley media is utilised to overcome these. Finally, I put forward an approach to interpreting the motives of the rock-art creators.

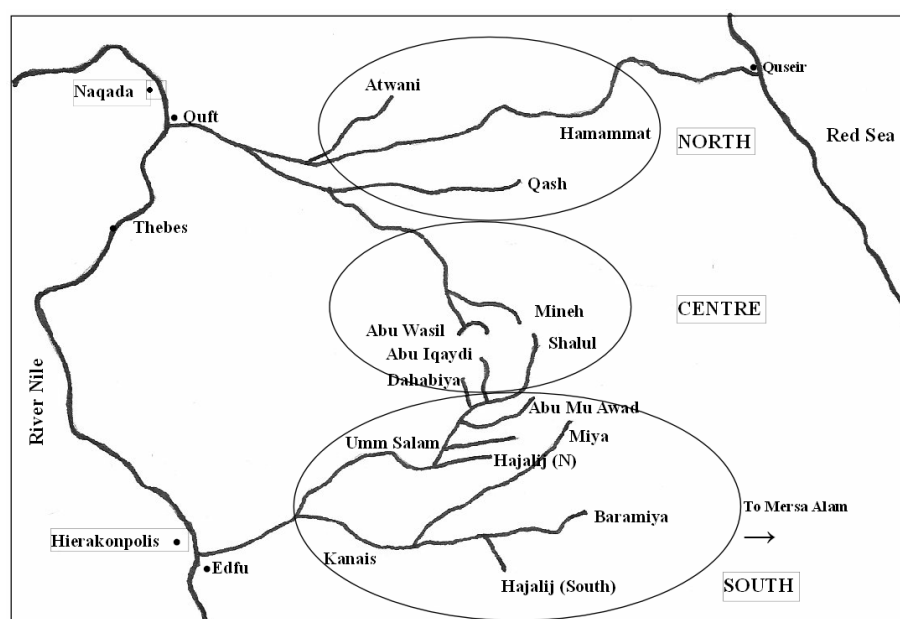
2.2 Methodological Issues Arising from the Corpus

2.2.1 The Composition of the Corpus

The corpus used in this thesis draws on four surveys ranging over a period of nearly eighty years. Two of these: the EDS and RATS, covered most of the Central Eastern Desert, while the other two (Winkler and Van Craeynest) were confined to the northern/central regions, and a single wadi-Wadi Baramiya, respectively. The result is the most comprehensive corpus so far of rock-art images in the central part of Egypt's Eastern Desert. A feature of much of the work published on Egyptian petroglyphs generally is that very few of them have more than a list of the images recorded, together with some drawings and photographs. There are two exceptions. The Joint Scandinavian Expedition to Sudanese Nubia in the Nile Valley tabulated the number of images for each motif and calculated the total at 6,999, putting them into tables (Hellström, 1970). In addition to this work, in her survey of Wadi Baramiya Van Craeynest (2004) is the only one who comprehensively tabulated images recorded in the Central Eastern Desert. The Winkler (1938) volume recording the efforts of the Robert Mond

Expedition was a preliminary publication, and he only tabulated the boats recorded in the RME survey. Both the EDS and the RATS volumes only present the raw data. Winkler's 1938 write-up thus still requires the totals to be calculated from the published material. The remainder of the Eastern Desert surveyors apart from van Craeynest did not tabulate at all. Original record sheets for these surveys are not archived and so are not publicly available. I begin with the EDS/RATS material due to my participation in some of its collection, and also deal with the RME and Van Craeynest material to add extra detail and fill in gaps in the survey area.

The Central Eastern Desert consists of two main wadi systems: Wadi Hammamat in the north and Abbad/Kanais/Baramiya in the south (Map 1). Most of the wadis run west-east. However, those in the centre (Abu Wasil, Mineh, Abu Iqaydi, Dahabiya and Shalul) are orientated mainly north-south. Moreover, one of the aims of this study is to investigate links between the rock-art and the Nile Valley predynastic and pharaonic cultures. It examines the petroglyphs in relation to routes through the desert and the ease (or otherwise) of access to where the petroglyphs were created (Chapter Seven). In the predynastic period the main settlements with evidence for the Naqada cultures are Naqada (north), Gebelein (centre) and Hierakonpolis (south). In the pharaonic era Quft (north), Thebes (centre) and Edfu (south) were important population and ceremonial centres. Therefore, this study examines the area by dividing the fifteen wadis, with 246 sites surveyed, into three regions-northern, central and southern (Table 2.1).



Map 1. The 15 wadis surveyed in the Central Eastern Desert showing the three regions: North, Centre & South.

Northern Area	El Atwani, Hammamat, Qash 37 sites (15%)
Central Area	Mineh, Abu Wasil, Shalul, Abu Iqaydi, Dahabiya 80 sites (32.5%)
Southern Area	Abu Mu Awad, Umm Salam, Umm Hajalij (N), Miya, Baramiya, Umm Hajalij (S), Kanais 129 sites (52.5%)

Table 2.1. Areas containing wadis with petroglyphs in the Central Eastern Desert covered in this study

2.2.2 Survey Problems

The EDS and RATS research became subject to some criticisms by Egyptologists. It was, for example, argued that the inventories were incomplete, lacked details on technique, had too few dimensions and lacked scale in the photographs (Huyge, 2002). In particular, it is usually only boat images which have an indication of scale. It should be said, however, that many of these details are in the original recording sheets and that omissions were probably caused by the desire for a relatively fast turnaround, in the case of the RATS of two months from conclusion of work to publication. This haste is evident from the publications. Moreover, both the EDS and RATS reports usually have details of site orientation and height, which are not rigorously included in every ‘professional’ publication. Nonetheless, some problems have been created by the nature of the publications in counting the number of petroglyphs reported and in identifying images which necessitated a detailed examination of the published illustrations and those in my possession. Overall, there is also a challenge in dating the animal, human and boat petroglyphs.

In order to number the corpus of the Central Eastern Desert surveys, the EDS and RATS published sites are combined in this study. No attempt has been made to re-number the sites in topographical order as this would leave no room for future discoveries, and because all relevant literature continues to refer to the original site designations. The RATS and EDS sites have simply been added together, with the EDS sites for each wadi being added on to the topographically sequential sites in RATS. The remaining Winkler and Van Craeynest’s sites are added sequentially to the EDS/RATS Baramiya sites, from BAR-19 to 39.

Acronyms for each site generally comprise the first three letters of the wadi in which they are located and can be found in Appendix One.

2.3 Creating the typologies

2.3.1 Animal Images Typology-Determining Numbers

The EDS and RATS catalogues simply stated what fauna were present in the petroglyphs at each site, sometimes without complete enumeration and description of the images present. Thus, determining the number of each animal image at each site presented the first problem in the elaboration of the corpus as the basis of my analysis in chapters Four to Eight. Without access to the original record sheets it was necessary to total up the figures site by site from the details in the EDS and RATS survey publications. This was simple in many cases as figures are given for each type of animal. Unfortunately, in other cases there is merely the generic statement of ‘cattle’ or ‘ibex.’ In addition, not all images present at a site were always illustrated. Therefore, only approximate numbers can be calculated.

The approach taken here is, for example where ‘giraffes are listed,’ to examine each photo and illustration closely with a magnifying glass in order to calculate the actual number. The publications do refer to individual rock faces and boulders, and they divide sites into left/central/right and top/bottom. By matching these to the illustrations it was possible to ascertain to which part of the site the non-specific number pertains. It is evident that the vast majority of problematic images from the generic descriptions are in fact illustrated. It is also clear that the recorders and editors have produced more precise figures for the larger and riverine animals (i.e. hippopotami and elephants). Reference will also be made to this writer’s photo collection, especially regarding QAS-3 (RME-18). Where a plural is used but the petroglyphs are not illustrated, two has been systematically added to the total. Therefore, numbers can usefully be calculated, but they represent a minimum in each case.

2.3.2 Determining Species

The vast majority of the Eastern Desert rock art is pecked and therefore fine detail is often absent. The large and riverine animals such as elephant, hippopotamus and giraffe are easily recognised. Cattle can usually be identified by their horns and bulky body shape. However, the question whether these are wild or domestic cattle is more problematic. The aurochs (wild cattle) had lyre-shaped horns, but so do East African domestic cattle today. Therefore, it is not the case that all domestic cattle are of the short-horned variety. Domestication probably took place in Neolithic times and it is therefore possible that the bovids in the rock art are either domesticated or a combination of wild and domestic cattle. The main problem concerns

identification of the Bovidae ungulates, which include sheep, goats and antelopes as well as cattle. The Barbary Sheep is shown in a few depictions, with the curved horns diverging rather than parallel-suggesting a front rather than side view of the head, and it is rare among the petroglyphs. The long spiralling horns of the (also rare) addax make it relatively easy to differentiate. But other species which may have been present such as Kob, Nile Lechwe, Gerenuk and Dorcas gazelles which are of various intermediate shapes and sizes and are not readily identifiable. The Scimitar Oryx, Roan Antelope and Nubian ibex all have long backward-sweeping horns. These are usually shown in an exaggerated fashion reaching as far back as the animal's rump, a depiction continued into modern times judging by relative patination.

It was often hard to differentiate between various kinds of quadrupeds with horns, especially when, although the EDS and RATS survey teams often had some interchangeable personnel, they did not consist of the same members each time. P. Cherry noted that, "The technique of pecking or incising on a hard rock surface does not permit subtle differences to be represented in highest detail and subsequent weathering and over-carving during the intervening millennia can further degrade the image which the artist was trying to portray" (Rohl, 2000: 188). In the case of both projects, a quadruped with horns sweeping back has sometimes been labelled as an ibex, although it could possibly be an addax or oryx. The problem can be demonstrated in Figure 2.1 shows a group of animals with the elongated horns. Two of the group have the two horns reaching back half-way along the body as in the ibex in real life. The others extend the horns nearly to the rear of the animal. This occurs in the oryx, but the horns are thin and much straighter. Because of the curve, the survey teams identified these petroglyphs as representing ibex. The other prey animal in Figure 2.1, being seized by dogs, is identified by Judd (2009: 18) as a wild ass, despite the detached 'mane.' In the absence of any reasonable alternative, this is maintained here.



Figure 2.1. Hunting scene in Wadi Baramiya, BAR-10, author's photo

A problem also exists where 'crocodile' or 'lizard' is noted and differentiation is not clear. This is particularly apparent in the Wadi Atwani where no less than 30 out of the total of 47 'crocodile' images are to be found. The recorders could not decide between a description of crocodile or lizard. The Atwani depictions are shown in some cases with splayed toes at ATW-6 characteristic of the gecko, which are not found outside this wadi, and are generally thinner than depictions elsewhere (Figure 2.2). The problem of identification centres on the high site of ATW-10 (Figure 2.3) where there are other features, such as the 'nets,' which are hard to identify. It has been suggested (Huyge, 2009) that these motifs are from the Palaeolithic period. In dealing with this problem one wonders if large lizards would be depicted in preference to crocodiles. They are therefore accepted as crocodiles for the purpose of this study.



Figure 2.2. 'Crocodile' with splayed toes, Morrow & Morrow, 2002: 197



Figure 2.3. 'Crocodiles' at ATW-10 (RME-14), Rohl, 2000: 146

2.3.3 The Overall Typology

The identified species in the rock-art will be examined under six headings: 'Riverine Animals,' 'Large Animals,' 'Ungulates,' 'Canines,' 'Birds,' and 'Other Animals.' Riverine Animals (crocodiles and hippopotami) are considered together since they inhabited the Nile Valley, rather than the desert where the petroglyphs are located. 'Large Animals' comprise elephants and giraffe-those most noticeable in terms of size and appearance. Asses, ibex, antelope, and cattle constitute the 'Ungulates' group as they are the animals which people from the Nile Valley would have targeted for hunting. 'Canines' and 'Birds' each have one animal, respectively the dog and ostrich. Finally, a number of animals such as felines, falcons and wild sheep, which have very few attestations, are grouped together under 'Other Animals' (see Chapter Four).

2.4 Human Images

2.4.1 Problems of Identification

All of the human images in the survey area are petroglyphs and therefore lack the potential detail of painted pictographs elsewhere in the world. 94% of these Central Eastern Desert human petroglyphs are pecked and in-filled, with only 6% shown in outline. The hammering technique therefore leads to a lack of fine detail. Heads are usually round and only occasionally wedge-shaped, while fingers and clothing are very rarely evident. Eyes are never shown unless the figure has been depicted in outline and this only occurs in pharaonic depictions, which are considerably more detailed than any of the other human images. Individual items of clothing are generally very difficult to discern from the outline of the body, although again more detail is evident where the image is in outline. In addition, 115 human figures are individually noted but are not illustrated. Others are referred to but not quantified in the survey publications. Sometimes examples may be referred to vaguely as 'hunters' or 'plumed,' but on other occasions the activity undertaken and the number of plumes worn are given. Figure size cannot be considered as generally measurements are not given in the publications, unless making a scaled comparison by reference to the illustrations. Both the EDS and RATS catalogues only give measurements for a proportion of boats and for an extremely limited number of figures.

2.4.2 Differentiating Types of Figure

The lack of definition in the petroglyphs has heavily influenced the typology which is discussed in Chapter Five. 'Stick,' 'Triangular,' 'Naqada,' 'Pharaonic' and 'Other' figures

have clearly definable characteristics. The difference between the Realistic and Other types lies in an image's completeness or otherwise, demonstrating the care (or lack of it) to denote a good likeness of the human body. Fortunately a large number of the human petroglyphs either stand in boats or are clearly engaged in hunting and can therefore be classified by these activities rather than appearance. Most of the remainder are simple stick figures showing legs and arms outstretched. They show only a human presence and their arm posture therefore has no special significance. It is only where the figure holds an object, has its arms raised or appears to be pointing that significance will be noted. This means that the action in which a figure engages, whether Stick or Realistic, is usefully often clear and potentially significant in its function. Lack of clarity does affect identification between bows and staffs as on occasion a curved stick may be capable of being assigned to either classification. However, these cases are fortunately few, and where a spear might be confused with a staff even fewer. There is also difficulty in deciding what may be a tail worn by a figure or whether a phallus is represented where there is a line shown between the legs. Clear examples of a phallus or perhaps penis sheath are rare (16) and given the more than one hundred hunting scenes in the corpus, it is argued in this study that the remainder (48) represent some kind of attached animal tail.

The number of human images including the horse and camel rider figures amounts to at least 986. 115 of these are mentioned in the survey publications but not illustrated. However, some detail is given about a number of these. The wearing of plumes is usually noted in the surveys even where the figure is not illustrated, as these appeared interesting and significant to the recorders and publication compilers. This was because of a presumed connection, however invalid, between the wearing of plumes by petroglyph figures and by pharaonic divine figures with double plumes. Problematically, the occasional use of the phrase 'plumed figure' does not indicate how many plumes are present. Where the number of plumes is stated such examples are included among the identified images, while those labelled generally 'plumed figure' are not.

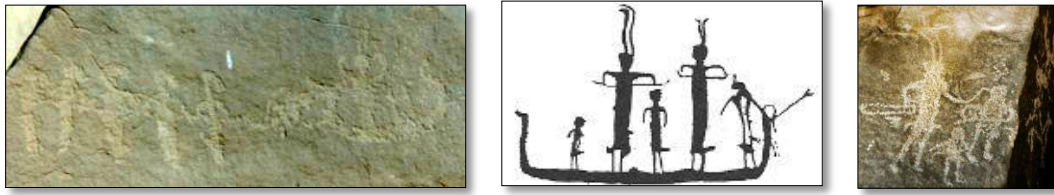
In order to construct the typology for the human figures, the lack of detail in the torso of the overwhelming number of images must be overcome. Torsos are mostly either a broad, mainly straight, band or a single stick-like stroke. Only the few figures in pharaonic art style or possessing a triangular-shaped torso depart from this pattern. Four categories therefore arise from these characteristics: 'Realistic'; with a broad band body, 'Stick'; simple stick figures,

‘Triangular’; possessing a torso in the shape of a triangle and ‘Pharaonic’; identifiable by comparison with dynastic images in Nile Valley tombs consistent with the parameters of pharaonic art. All the former possess complete limbs, but there are a significant number of images which do not, and therefore are not naturalistic. These will therefore be categorised as ‘Other.’ There is a small group of seven figures which resemble those on Naqada pottery and since one of the main aims of this study is to date the corpus, they comprise a separate ‘Naqada’ category (see Chapter Five, page 6). Finally, those figures not illustrated and not described in detail in the survey publications, especially in Wadi Baramiya, are covered under the heading of ‘Not Identified.’

2.4.3 Identifying Gender

Assigning gender to the human petroglyphs is often problematic. For example, the description of an image as a ‘dancing goddess’ is used in both the EDS and the RATS publications. In some cases this is the equivalent of the label ‘arms raised’ figure which describes a figure with arms raised above the head and incurved. But ‘dancing goddess’ cannot be invariably accepted as an ‘arms raised’ figure. The overwhelming majority of these images do not possess features by which they can be identified as being female. The pecking rather than incising method used militates against the showing of gender, and there is only possibly the ‘dancing goddess’ example from WAS-10 which shows the tapered body form evident on D-Ware pottery (see Figure 2.4).

Apart from one half of a copulating scene at HAJ (N)-3, the figure in a boat noted as a ‘dancing goddess’ at WAS-10 (Figure 2.4) and one each in two, possibly three ‘family’ groups at KAN-3, SAL-25, MIN-7, and the WAS-10/DR-2 (Figure 2.5) boat figures, there are no other examples of human motifs which are open to identification as female. The three ‘family’ groups at KAN-3, SAL-25 (Figure 2.6) and MIN-7, depicted in different styles, each consist of three figures: one large, one medium and one small, which may represent parents and a child. It is possible that the two smaller figures in the ‘chieftains’ boat at WAS-10 are also children as they are significantly smaller than the three other figures. Overall, only 68 (8%) of the petroglyphs have a clear male marker. However, the usual uniformity of height where groups of figures are depicted, plus the carrying of weapons and widespread engagement in hunting and the lack of female body shapes suggests that the overwhelming proportion of human motifs in the Central Eastern Desert are male.



Left: Figure 2.4. 'Dancing Goddess,' WAS-10, author's photo, Centre: Figure 2.5. Possible family on board vessel, WAS-10, Right: Figure 2.6. 'Family' group, SAL-25, author's photo

2.4.4 Horse/Camel Riding

Horse and Camel Riders stand out in comparison with the other human images, since horses were not present in Egypt before the Eighteenth Dynasty, and were not in widespread use until the Second Intermediate Period in the middle of the 2nd millennium (Osborn & Osbornova, 1998: 137). Controversy exists regarding the introduction of camels before the 1st millennium BCE (Osborn & Osbornova, 1998: 157). Because the Horse and Camel Riders are clearly separate from the data in which the predynastic and pharaonic images will be identified, they will be considered as part of the overall total of 986. However, a separate total of 859 will be used when considering ancient Egyptian elements and in Chapter Five the latter total will be used when calculating the percentage share of each figure type. The number of figures not illustrated in the publications is mostly evenly spread through the wadis, with the exception of Wadi Baramiya. A significant number recorded by Van Craeynest (2004) are not illustrated. However, they are described and tabulated in detail, which assists in identifying their appearance and the activities in which they engage.

2.4.5 Using Accoutrements and Gesture

The seven human figure types, which will be discussed in Chapter Five, are broad categories and necessarily so due to the lack of torso, facial feature and clothing detail. Therefore, in addition, accoutrements such as headdresses and weapons are important in identifying the activities in which the human figures are engaged, and will refine and add detail to the typology. The wearing of one, two, or three or more plumes, and the carrying of a bow or throw-stick is examined, as is the position of the arms when engaged in an activity such as pointing or raised. The latter covers both the 'arms raised' figure comparable to examples on C and D-Ware and clay figurines, and those petroglyphs where the arms are raised but not incurved above the head. Because gender is difficult to determine, the term 'dancing goddess

is replaced by *'arms raised' figure* to describe an image where the arms are above the head and incurved. Considerable numbers of the human figures either stand in a boat or are engaged in hunting, so these categories will also be examined; as will those who have an animal under 'control' by a lasso or tether. Identifying the activities which the figures undertake will assist in interpreting the motives of the petroglyph creators and the meaning of the images. Finally, where figures display combinations of features-such as wearing a feather and carrying a bow, these will be labelled as 'combinations.'

2.5 Boat Typology

2.5.1 Identifying Boats

884 individual boats have been recorded in the various surveys or additionally identified from photographs and fortunately only 50 (5.5%) of these are not identified at all or are referred to as 'small' or 'high prowed,' thus providing no useful information. A further 67 are not illustrated, but are described and their hull shape designated as sickle or square since all the survey teams from Winkler to Van Craeynest worked within these descriptive parameters. The presence of a mast, sail, and/or steering oar may also be included, as may the presence of a large figure on board. Some of these boats are described in considerable detail, despite not being illustrated. Thus there is no photo or line-drawing for 117 (13%) of the boat petroglyphs, but there are useable details for nearly 95% of them. Those boats with details but without illustration will be included in the corpus when noting features and constructing a boat typology in order to categorize the largest possible number of vessels (see Chapter Six, Table 1).

2.5.2 Previous Attempts at Classification

The major problem of creating a typology for the boat petroglyphs is that nearly half of them (49%) consist simply of a hull with no feature such as a 'standard,' 'fronds,' crew, a cabin, mast/sail or steering oar. Indeed, the identification of prow and stern is often problematic. Various attempts have been made to overcome this basic problem and to classify boat petroglyphs in the Eastern Desert and the Nile Valley, notably by Winkler (1938), Engelmayer, (1965), Červíček (1974) and Vinson (1987). The earliest attempt at a comprehensive typological division by Winkler has been especially influential on later authors. Winkler divided boats into 'Sickle' and 'Square' types; the former being curved "like a segment of a circle," while the latter "has a straight base and more or less vertical

pro and stern.” (Winkler, 1938: 36) He termed sickle boats with the ends incurved in various shapes ‘Incurved Sickle,’ and square boats with an incurved ‘stern’ (identification of prow and stern often being problematic) as ‘Incurved Square.’ Within the square boat type he derived a variety of forms according to the shape of the prow, stern and any manner of ornamentation of these; six in all termed A to F. Since they owed their genesis primarily to Winkler, the EDS and RATS publications used his basic typography of the four type classification; and it has the merit of simplicity. Moreover, given that, with the exception of a raft, a boat has a prow and a stern, there is a limit on permutations of a vessel’s shape.

Engelmayer’s 1965 classification system divided boat petroglyphs from the UNESCO Nubian campaign and some of Winkler’s work into twelve categories ranging in date from Naqada I to the medieval era. He allocated six of these types to the Predynastic period. Almagro Basch and Almagro Gorbea (1968), also working under the auspices of the UNESCO programme, adopted Engelmayer’s system; while Červíček (1974) produced a scheme involving thirty-three types, the first eleven said to be predynastic.

The key question is; is it at all possible to refine a comprehensive typology which covers all boat motifs in Egyptian rock-art, including both predynastic and pharaonic ones? Vinson (1987) noted several weaknesses in all these classification attempts. Firstly, Winkler made no distinction between papyrus boats (confusingly called rafts by Vinson) and papyriform (wooden) vessels. Secondly, he did not clearly explain how square boat types A-F illustrated were actually derived from square boats, and it is not readily apparent. Perceived differences between boat types in all these systems may be due to drawing/incising technique, or individual style and ability; concluding that, “any attempt to draw extremely fine distinctions will probably result in more types of representations than there were types of boat” (Vinson, 1987: 127). For example, Červíček’s types VI and VIII include only two examples each (Vinson 1987: 147). Therefore, Vinson’s conclusion that “many authors have attempted to make fine distinctions but such efforts have resulted in a great deal of confusion and contradiction” is valid (Vinson, 1987: 84-85).

Both the EDS and RATS editors maintained Winkler’s basic four part classification of boat petroglyphs into ‘Sickle,’ ‘Incurved Sickle,’ ‘Square’ and ‘Incurved Square.’ They did not use the Winkler square boat derivatives. Morrow and Morrow added flared boats in RATS to accommodate those with a square hull but with a straight, very angular prow and stern. This study takes the RATS system as a starting point for discussion due, firstly, to its simplicity, to

the framing of the EDS/RATS corpus used here, and to the widespread use of the terms ‘square’ and ‘sickle’ in publications concerning Egyptian rock-art. This is especially important since, Engelmayer, Almagro Basch/Almagro Gorbea and even Červíček—who had access to the Winkler Archive at the Egypt Exploration Society, concentrated on the rock art of the Nile Valley and Nubia. Huyge’s unpublished PhD (1995) thesis concerning more recent investigations at El Kab also used Červíček’s system.

2.5.3 Issues in Creating a Boat Typology

Attempts to create a comprehensive typology for Egyptian boat representations have faced two main difficulties. Firstly, many of the petroglyph boats are simple hulls and lack details to determine function or to differentiate types based on shape. Secondly, before the publication of the EDS and RATS survey reports, there were insufficient examples from the desert as opposed to those recorded in the Nile Valley, mostly in Nubia. This has resulted in typologies which either have too few types (Winkler, 1938) or too many (Engelmayer, 1965, Červíček, 1974). All boats either have a straight or a curved hull, and usually a prow and stern, otherwise they would be a raft. In order to date and to determine the function of a boat, more detail than these basic shapes are necessary. Both the four-part ‘Sickle’/ ‘Incurved Sickle’/ ‘Square’/ ‘Incurved Square’ typology designed by Winkler and Červíček’s thirty-three types are commonly used.

Both predynastic and pharaonic boats can be any of Winkler’s four types, and while Červíček’s typology does distinguish between early and late vessels it cannot encompass the corpus found by the Central Eastern Desert surveys as it was completed well before their publication. Morrow and Morrow (2002) added a ‘Flared’ category to Winkler’s four basic types for those square-hulled boats with symmetrically-angled prow and stern. Vinson (1970) based his typology on his identification of many sickle-shaped boats as papyrus vessels, and on the symmetry or asymmetry of prow and stern. All of these terms are too general, if we are to usefully examine boat image distribution and associations, and date and explain their function in the petroglyph scenes.

In response to all these issues, Judd, (2009) the only researcher to have worked over the entire Central Eastern Desert survey area and also in the Kom Ombo Drainage Basin, abandoned all efforts to categorize boats into types. He accepted that Winkler’s division of ‘Square’ and ‘Sickle-hulled’ boat reflected a fundamental difference between sickle or

‘banana’-shaped hulls and those with straight hulls. However, the many boats with slightly curved hulls, or hulls straight in the middle but curved at the ends, led him to the conclusion that many images could not be assigned to one category or the other. He therefore attempted to reduce the subjective content of a typology by compiling a list of 14 features: Single line hull, Curved hull, At least one finial (stem/stern post), Incurved finial, Divergent finials, Decorated finials, ‘Flower’ decoration (‘shield’-shaped feature on ‘frond’ boats), Cabin, Mast, Passenger(s), Crew and Towing crew. Each vessel could then be described by the presence or absence of these features. From this descriptive approach he was able to take an overview of the distribution of boats over the survey area. By this means he avoided the temptation to automatically compare boats in the petroglyph scenes with predynastic pottery and pharaonic tomb portrayals simply on the basis of shape. He was able to find generalized differences in the style of boat depictions between different wadis and areas (Judd, 2009: 32-33).

In order to sufficiently delineate different features they must be easily recognizable and suggest a particular use. The identification of ‘finials’ (a stem or stern post marked by a prolongation of the hull upwards) is too subjective as it relies on individual perception. But the remaining features: presence of crew and figures, means of propulsion, shelter (cabin or awning) and additional decoration are discrete and recognizable items and therefore are utilized here. The feature which Judd refers to as a ‘flower’ (Judd, 2009: 110) is here described as ‘fronds,’ hence the designation of some incurved square and sickle vessels as ‘frond boats.’

2.5.4 Creating a Useable Boat Typology

The typology presented here develops previous attempts at building a comprehensive system. Previously, preconceptions concerning the origin and make-up of the boats depicted have coloured their identification and interpretation. Taking into account too many superficial differences according to individual carving/representational skill and technique will inevitably produce too many boat types for meaningful analysis. Thus, the number of types should be comprehensive, but kept to a minimum. Morrow and Morrow (2002) added the ‘Flared’ boat type to the basic four-part model for square-hulled boat motifs with a straight but very angular prow and stern. Since this type appears to be mostly confined to the southern area of the Central Eastern Desert, this additional type may be justified as a discrete division.

The Incurved Sickle and Incurved Square boats have a configuration which clearly departs from the basic Sickle and Square types. Although there are relatively small numbers of boat motifs in these rarer petroglyph types, these are sufficiently discrete and can be related to a comparable Nile Valley object; the Abydos clay box in the Ashmolean, and to rock-art at Hierakonpolis. Therefore, this study maintains the four original designations based on hull shape alone and adds the RATS 'Flared' type.

Meaningful conclusions about the date and function of boats in the petroglyph scenes require more description of their features, rather than reliance on shape. The 'Square/Sickle/Flared' typology is well established in discussion of the Egyptian petroglyphs. Therefore, despite the difficulties in using this typology, I decided that it was worth utilizing it as the basis of a more thorough analysis by complementing it with an additional way of describing and classifying the images. The features selected as significant are both related both to the boats (cabins, oars, steering oar, sail or mast) and to people in them (crew and large figures either in isolation or in groups). The correlation between the types used in the recent publications and selected features was analyzed, and the results are summarized in Table 2 in Chapter 6.

2.6 Dating Petroglyphs: Boat Images as a Case Study

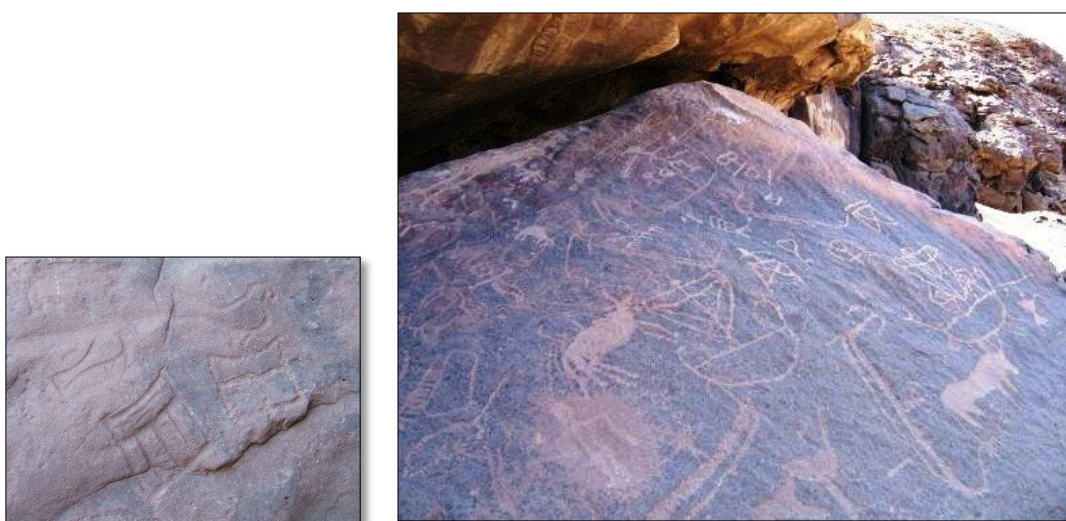
2.6.1 Dating Boat Petroglyphs – radiometric dating techniques and patination

In attempting to date the Central Eastern Desert petroglyphs, one faces a number of serious obstacles. No definitely dateable artefacts have been found in associated contexts with any of the petroglyphs. The value of obtaining absolute dates for ancient rock art, by radiometric dating techniques (radiocarbon methods or uranium-thorium series) or optically stimulated luminescence (OSL), is still hotly debated (Beck *et al.* 1998; Malakoff 1998; Huyge *et al.* 2001; Whitley and Simon 2002; Huyge 2005; Jacobs and Roberts 2007; Vafiadou *et al.* 2007). Even if one of these methods could be shown to be reliable, scientific dating of the Central Eastern Desert petroglyphs has never been feasible due to the lack of finance and official permission because of the ending of the SCA concession.

Using relative patination remains a means by which the petroglyphs may be dated. Winkler (1938) employed a series of coloured cards in the RME survey. From this he constructed a rating scheme from 1 (darkest and closest to the original colour of the rock) to 10 (lightest). However, when he applied this scale it conflicted with his four-fold interpretive scheme. For

example, he divided the main face at WAS-10 (RME-26/DR-2) between Eastern Invaders and Autochthonous Cattle Herders, despite there being no discernable difference in patination between the images in this writer's perception (Winkler, 1938: plates XVIII & XXII).

Winkler himself noted that ideal, stable conditions regarding atmospheric conditions such as rain, dew and light over the millennia have never existed. None of these factors have been constant and the mineralogical composition of the rock varies over even a small area (Winkler, 1938: 33). Even the same rock surface may start with a mix of colours and this will affect the hue of the patina formed. An illustrative situation is QAS-3 where a serekh of the first Dynasty I king Narmer (c.a. 3050 BCE) and an empty serekh, which ought to be earlier, low down at the front of the site have a patination the same as that of the rock surface (Figure 2.7 & 2.8). Boat and animal images on top of this cave site, which have been more exposed to sunlight and arguably ought to be darker, have various lighter hues. The effect of sunlight is shown at SAL-12 (Morrow & Morrow, 2002: 58) noted by Wilkinson (2003: 57) where one half of a line of ibex is darkly patinated and the other half lightly due to an overhanging ledge keeping half the scene in shade all day. A further example can be seen at HAM-13. On the front surface a boat has rigging and a central mast, indicating at least a New Kingdom (c.a. 1500 BCE) date, while on the rear surface another boat has an 'arms raised' figure on board, which suggests a predynastic date (Figure 2.9). Although at least 2,000 years therefore separates these images, and the patination of the former is lighter than the latter, the difference in hue is quite small.



Left:

Figure 2.7. Narmer & empty serekhs, QAS-3 (RME-18), Right: Figure 2.8. Top of ledge, QAS-3, author's photos



Figure 2.9. HAM-13, showing predynastic vessel Left and pharaonic boat with mast Right, author's photo

Patination can only be used to date petroglyphs when images are on the same rock surface, open to the same atmospheric conditions and not over the course of a wadi or the whole survey area. It is useful to determine which images comprise a contemporaneous scene, but not beyond that. Even where a clear difference in patination exists and tells us that one image is later than another, this is often all it is possible to learn. Figure 2.10 from SAL-9 shows a boat depiction so darkly patinated that it has returned to the colour of the rock. The light scene of a figure, dogs and ibex is much lighter and therefore clearly later. However, unless the depression above the boat represents a sail, this does not help to date either image.



Figure 2.10. SAL-9, Wadi Umm Salam, darkly patinated boat and light hunting scene (right), author's photo

Stratigraphy and superimposition of petroglyphs combined with relative patination were used Huyge (1995) to produce a seriation of images at El Kab. In particular, he found examples where a giraffe with darker patination was overlaid by a sickle boat stylistically dateable to Naqada II (Huyge, 2010, personal communication). However, there are several reasons why this approach is not applicable to the Central Eastern Desert. The petroglyphs at El Kab are mainly situated at two restricted locations, the 'Rock of the Vultures' and the 'Rock of the Pigeons' where there are useful superimpositions. Moreover, using relative patination on the same rock surface is easier over this constricted area. This is not the case in the desert, where there are few superimpositions. Even where there are, as at SAL-14, there is a mass of

images, it is often not clear which one overlays which image, and dateable motifs are lacking (Figure 2.11). The one image which is easily dateable is the sickle boat with triangular steering oar and therefore is New Kingdom or later. It can be dated by the steering oar, but the few images it overlaps, which are difficult in any case to ascertain, will only be earlier than c.a. 1500 BCE. A rare clear superimposition at HAJ-8 sees two giraffes overlaid by a boat, but the vessel is not easily dateable (Figure 2.12). Other images at this site suggest a probably predynastic date, but alone this superimposition tells us only that the giraffes are earlier than the boat. The rarity of clear superimpositions in the survey area means that using stratigraphy as a dating method is not feasible.

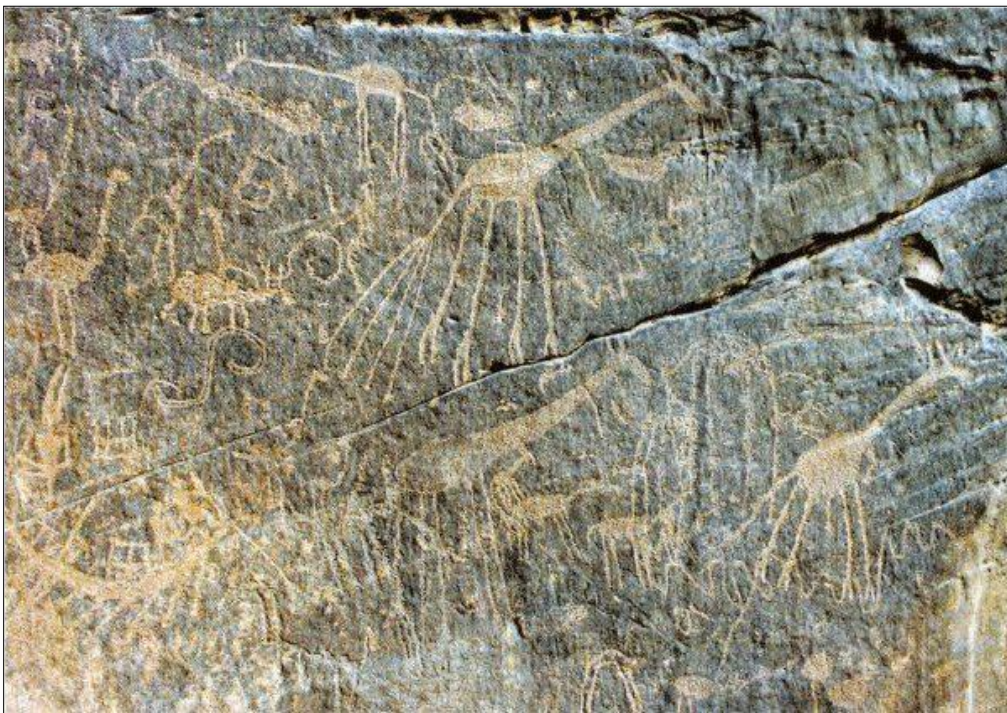


Figure 2.11. SAL-14, author's photo



Figure 2.12. HAJ-8, boat overlaying giraffes, Morrow & Morrow, 2002: 41

2.6.2 Dating the Boat Petroglyphs Stylistically

The most reliable way to date the petroglyphs is to use stylistic analysis to compare rock-art with mobiliary art in the context of a better understood chronology. Since there are boat depictions among the Nile Valley predynastic and pharaonic artefacts, comparable to a number of petroglyphs, it will be these examples which are most useful in dating the desert images. It should be possible then to date other images and scenes by association with known examples. In order to date the boat images in the Central Eastern Desert stylistically it is necessary to study them within the overall context of comparable material with known dates (Table 1), mostly found in the Nile Valley. The boat petroglyphs are dated here according to comparison with evidence from the Nile Valley Predynastic and Pharaonic/Greco Roman cultures. Mobiliary art of the Predynastic era (5000-3100 BCE) includes pottery, palettes, models, knife handles, ivory and bone labels, the painting in Tomb 100 in Hierakonpolis, and the Gebelein Linen. Our main sources of information for the Dynastic period comprise papyri, tomb paintings, and boat models. A small number of simple clay boat models from excavated contexts dating to the Badarian period (before 3900 BCE) are canoe-like models, perhaps representing a papyrus boat with built-up sides rather than a raft with a flat deck. They are so simple that it is not possible to recognize a comparable type among the petroglyphs. There are no representations of boats on Badarian artefacts. It is in the Naqada I period that such evidence is first found. There are fifteen drawings which may be identified as boats, 9 on pottery, 4 on the Gebelein Linen, one on a stone palette, and one on a clay box in the Ashmolean Museum. Although the majority seems to represent sickle-shaped boats, there are two examples of square-hulled boats, and one contested example with a very high prow on a ceramic sherd, also in the Ashmolean Museum.

Period	Approximate date (calibrated)	Diagnostic image
Naqada III (Protodynastic/Dyn.1)	3300-2900 BCE	Palettes, knife handles, models
Naqada IIC-IIID	3650-3300 BCE	D-Ware Pottery
Naqada I-IIAB	3900-3650 BCE	C-Ware Pottery
Badarian	4400-3900 BCE	

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Table 2.2. (after Hendrickx, 1996) Chronology of the late predynastic & early dynastic eras in the Upper Egyptian Nile Valley-Pharaonic Egypt begins c.a. 3050 BCE

2.6.3 Naqada I Boat Motifs

A

large variety of boat forms is found in the Naqada I Period, which suggests that a wide variety of boats, ‘Sickle’ and ‘Square,’ was actually used in Egypt as early as the fourth millennium BCE. As a consequence, simply comparing apparently similar shapes in mobiliary art from the Nile Valley and in the desert rock-art corpus will be unproductive. Naqada I boats on mobiliary art show multiple oars or none, sometimes there is also a long steering oar towards the stern, and most boats are shown with cabins. A Naqada I boat on a C-Ware bowl in the Egyptian Museum (Cairo) is often shown without its complete context, which includes images of ostrich, crocodile, antelope, hunting dog, hippopotamus, scorpion and fish (Figure 2.13). The first five of these are also represented in several of the petroglyphs. Caution should be used, however, when trying to date the petroglyphs on the basis of the images on pottery. The creators of the petroglyphs could have seen the represented fauna over a long period of Egyptian Predynastic and Dynastic history. Nor are there any exact parallels in the petroglyphs to the boat on the bowl in the Egyptian Museum in Cairo. There are representations of hippopotami on several C-Ware bowls, including animals being harpooned. There is a comparable harpooning scene in Wadi Mineh (Rohl, 2000: 78), but while there are a number of bowls with hippopotamus motifs, the petroglyph example is unique. Hippopotamus hunts are a feature of royal activity in the Dynastic period, but the presence of a hippopotamus hunting scene among the petroglyphs does not necessarily constitute a dating marker.



Figure 2.13. Image of a boat surrounded by ostrich, crocodile, antelope, hunting dog, hippopotamus, scorpion and fish on a C-Ware bowl (Naqada I Period, 3900-3600 BCE), now in the Egyptian Museum, Cairo, author's photo

There is one boat image useful for dating: the clay box in the Ashmolean Museum in Oxford has a painted incurved sickle boat with an S-shaped prow and a double 'frond' at the stern. It does come from a dateable context from the end of the Naqada I period (Randall-MacIver *et al.* 1902, see Figure 2.14), or perhaps the beginning of Naqada II (Graff, 2009: 250). Despite its chronology, this drawing is different from the four sickle boats on the Gebelein Linen, which is also dated to the end of Naqada I or the beginning of Naqada II Period (Adams & Cialowicz, 1997: 36, Hendrickx, 2011: personal communication). In addition to the S-shaped prow and double feature at the stern, there are several lines projecting inwards from the stern, whereas on incurved boat drawings in the Central Eastern Desert there is only one, usually projecting from the often triangular object at the top of the stern (Figure 2.14).

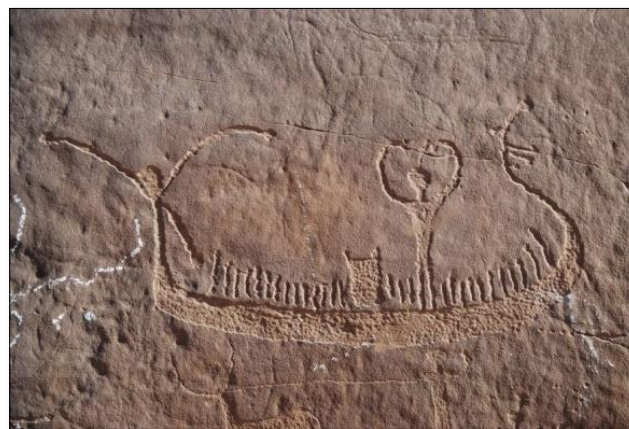
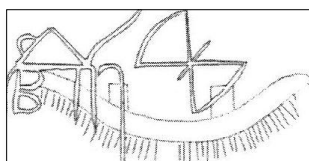


Figure 2.14. Example of a petroglyph of an incurved boat with a single line or 'frond' projecting inward from a triangular object at the top of the stern, BAR-9, author's photo

As the Ashmolean box example is only one image on mobiliary art that is even somewhat comparable in style, there is no dateable range from the Nile Valley that can be applied to the survey area petroglyphs. However, several pertinent observations can be made. The Ashmolean motif does not appear at all on any D-Ware pottery (2009). While there are examples of boat representations with upward-bending ends, there is only one with the triangular element and none with the three ‘fronds.’ The ‘arms raised’ figure is found on both Naqada I and II pottery and in the form of figurines. It may even date from Badarian times as there are figurines attributed to that period in a similar position. The motif does not continue into the Naqada III Period in a Nile Valley context, nor is it associated with any petroglyph assigned to this period.

2.6.4 Naqada II Boat Motifs

The largest number of boat representations that are commonly assigned to the Naqada II Period is found on D-Ware pottery (Graff, 2002 & 2009). There are similar boats in the painting in Tomb 100 in Hierakonpolis (Wilkinson, 2003: 69). A total of 59 boat petroglyphs, identified as Type I (Figure 2.15) and dated to the Naqada II Period by the different investigators, were found in Upper Egypt and Lower Nubia (Dunbar 1941; Engelmayer 1965; Hellström and Langballe 1970; Červíček 1986; Huyge 1995; Váhala and Červíček, 1999). Thus, the representations in the petroglyphs (Figure 2.16) are heavily outnumbered by those on the D-Ware pottery. The latter are shown with various ‘standards,’ while the petroglyphs in the Nile Valley very rarely possess this feature. This suggests that the representations on the pottery are special in some way. It is noteworthy in this context that the vast majority of D-Ware vessels were retrieved from graves.



Left: Figure 2.15. Typical example of a Type I petroglyph, dated to the Naqada II C/D Period (3500-3300 BCE), Červíček, 1974:abb. 463, Figure 2.16. Examples of Type 1 sickle boat, BAR-1, Morrow & Morrow, 2002: 154

2.6.5 Naqada III Boat Motifs

In the Naqada III Period boat models, knife handles, ivory and bone labels, the Qustul Incense Burner, and drawings on pottery rarely display a wider range of boat forms compared to the mobiliary art of the Naqada I and II Periods. Boat models, the Qastul Incense Burner and a vase in the British Museum (London) display a new kind of boat design with a very high prow and a triangular stern. The same design is seen in 48 petroglyphs in Lower Nubia and Upper Egypt (Dunbar 1941; Engelmayer 1965; Almagro Basch and Almagro Gorbea 1968; Hellström and Langballe 1970; Červíček 1986; Huyge 1995; Váhala and Červíček 1999). A similarly shaped boat, but with a more sloping prow and without the triangular stern, is displayed on a graffito in Gebel Sheikh Suleiman, by some boat models, on the Narmer Palette, and in eighteen petroglyphs in Lower Nubia and Upper Egypt (Dunbar, 1941; Almagro Basch & Almagro Gorbea, 1968; Otto & Buschendorf-Otto, 1993; Váhala & Červíček, 1999).

2.6.6 Pharaonic and Later Boat Motifs

The Eastern Desert was one of the sources of raw materials such as gold, granite, greywacke and galena for Pharaonic Egypt (Klemm & Klemm, 2002). At the same time, one of the routes along which disassembled boats were transported by donkey caravan, in order to be reassembled on the Red Sea coast on their way to the enigmatic Land of Punt (Bard and Fattovich, 2007), led through Wadi Hammamat. This route, and that to Berenike further south on the Red Sea coast, is also attested by late rock art as well as Greek and Latin inscriptions, especially in Wadi Qash (QAS-3/ RME-18) and Wadi Mineh (MIN-14/RME-24b). We should expect to find representations of boats with masts or sails along these routes between the Nile Valley and the Red Sea. Vessel technology advanced in Egypt during the early Dynastic Periods, which is obvious in the use and the position of a sail. Indeed, an important defining feature of a boat petroglyph dating to the Pharaonic Period is the presence of a mast and sail, and there is no clear example in the Central Eastern Desert of a petroglyph showing a sail before the Naqada III Period, although they are known from Lower Nubia. The position of the mast is also indicative, as it moved back towards the middle of the vessel between the Naqada III Period and the New Kingdom (1570-1070 BCE), a period of nearly two millennia.

Early boats would probably only have been able to sail before the wind. We do not see sea-going vessels, with the mast set one-third of the way back from the prow (Bowen, 1960), illustrated before the Fourth Dynasty (2613-2498 BCE). In addition, it is not until the reign of Hatshepsut (1498-1483 BCE) that large sea-going vessels able to carry large cargoes are shown, in addition to large Nile vessels which could transport two massive stone obelisks at a time.

There are many paintings in royal and private tombs, temple murals, papyri as well as boat models that display vessels from the Pharaonic Period. There are several features which assign a boat an Old, Middle or New Kingdom date. In the Old Kingdom (2686-2181 BCE), there are usually two rear steering oars with thin leaf-shaped blades (Landström, 1970: 40); a triangular sail also appears at this time. The vessel that was interred next to the Pyramid of Khufu is seen to have an incurved stern and a vertical prow after the 1224 pieces of cedar wood were reassembled into an almost 44 m long boat (Jenkins, 1980:83). This feature later only occurs in New Kingdom tomb paintings of the 'Otherworld,' never in secular contexts. The boat associated with the Pyramid of Khufu was certainly not an ordinary vessel and may even have not been meant for actual travel or transport at all. By the 9th-10th Dynasties (2160-2040 BCE), boats are shown with one or more very large steering oars attached to a pole at the rear of the vessel. Middle Kingdom vessels (2040-1782 BCE) also have this feature, in combination with a retractable mast. Finally, the central mast is a defining feature of New Kingdom vessels (1570-1070 BCE); as is the triangular steering oar blade, which never appears before this period (Figure 2.17).



Figure 2.17. Petroglyph from Wadi Abu Mu Awad showing New Kingdom vessel or later with steering oar, Morrow & Morrow, 2002: 105

2.6.7 Beyond the Boats: Dating the Petroglyphs

The approach taken here is firstly to identify clearly Naqada vessels by reference to the C and D-Ware and other Nile Valley artefacts, and pharaonic boats by the presence of mast, sail, and/or steering oar(s). But by this means only a minority of the boat images will be identified (49 Predynastic Naqada I /II/III and 72 Pharaonic). The next stage is to identify ‘compositions.’ These are sets of associated and related motifs in terms of style, subject, superimposition and patination and to date the boat images which are unknown in Nile Valley evidence by their occurrence in these scenes.

An illustrative example of a composition is seen at BAR-9 where 8 boats, one with an ‘arm raised’ figure amidships, are found among numerous animal and hunting motifs (Figure 2.18). All of these images, with the exception of four later additions of three horses and a camel, constitute a single composition. A considerable number of animals and six boats can be seen here. Most of these are square boats, which are common in the corpus. Two possess a stern with a feature seen in other boat images, akin to a ‘T’ with downturned ends (Figures 2.19 & 2.20). There are two other similar stern features which can assist in dating. Both of these boats also have two ‘streamers’ at the other end. Double streamers are found on the sickle boats on D-Ware hanging from the ‘standard’ pole. However, none of the few Naqada II petroglyph boats have them. The streamer is mainly found in southern wadis (22 out of 25 sites). These features alone do not tie the design to any particular time period. However, in the right-hand corner there is an incurved ‘three frond’ boat with an s-shaped prow which bears some resemblance to the boat on the Ashmolean clay box. Again, this alone is not conclusive of an early, predynastic date. But it additionally contains a clear ‘arms raised’ figure found as figurines and on C and D-Ware, dating to both Naqada I and II. Therefore, it is possible to date this both this boat type and the scene as being predynastic in date. If the incurved ‘frond’ boat can be dated to late Naqada I/early Naqada II, then we have a date for the whole scene.

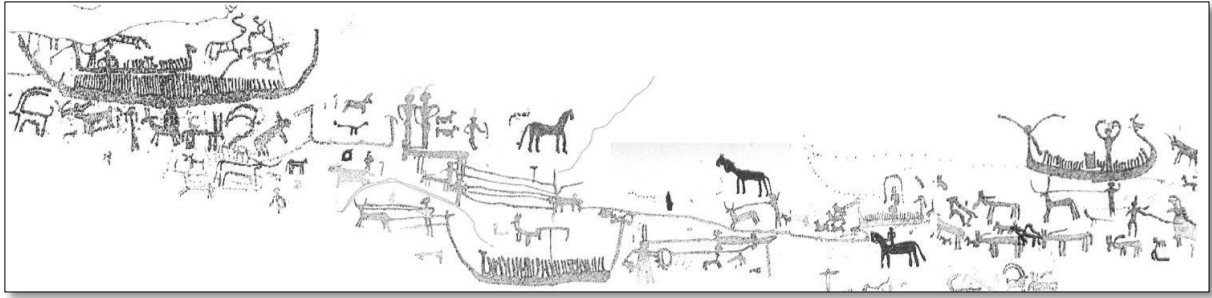


Figure 2.18. Panoramic composition of four illustrations combined, BAR-9, after Fuchs, 1991 (NB: right-hand section with two further boats, animals and control of antelope not shown)

Scenes with the ‘arms raised’ figure alone can be dated to Naqada I/II; and with the incurved ‘frond’ boat to a narrower period than that: Naqada Ic-IIa. It will be seen in Chapter Six that given the paucity of the Naqada II sickle boats on the D-Ware, their lack of association with hunting scenes and the lack also of ‘arms raised’ figures that scenes with this figure are likely to date from late Naqada I/early Naqada II. In addition, all three ‘T’ features are found at one site or more in close association with an ‘arms raised’ figure, so point to a predynastic date.



Left: Figure 2.19. the three ‘T’ stern features, Right: Figure 2.20. ‘T’ feature with ‘arms raised’ figure in boat, MUA-12, author’s photo

Where boats have examples of these features, they will be labelled ‘Predynastic,’ as will clearly associated images on the same rock face with the same patination. Given the strong association of boats, especially ‘Square’ types, plumed figures; often engaged in hunting and animals such as giraffe, hippo, crocodile and hippopotamus which (mostly in southern wadis) can be assigned an early date, boats in this context will be termed ‘Probably Predynastic.’ By this means, another 313 boat images can be dated: 20 Pharaonic and 293 Predynastic. Human and animal images which are determined to be integral to a scene with dateable predynastic/pharaonic boats can then be dated, and then those associated with dateable images and of the same patination.

In order to attempt to date each site the animal, human and boat petroglyphs will be examined in four stages. The first step is to identify the compositions by combining those images with the same patination and style on the same rock surface. Intrusive images are excluded. Next, images within the composition which can be matched to a comparable motif in the Nile Valley predynastic, pharaonic and Greco-Roman cultures will be used to date that composition. Sites are designated 'Predynastic,' 'Late,' or if elements are present from both cultures will be labelled 'Mixed' (see Appendix Six for a site by site description). By this means it will be seen that 73% of sites can be dated. Because of the prevalence of animals, and hunting scenes which cannot be given a specific date, there will inevitably be sites at which petroglyphs have been added at different times but will be dated only by a comparable motif to one historic period. Then, the location of dated image and sites in the landscape will be considered concerning site height, orientation and relationship to vegetation, water and mineral resources and other geographic features such as proximity to a side wadi or wadi junction.

2.7 Distribution

2.7.1 Questions Regarding Distribution

"Rock art is characterised by the creation of particular images in particular places-it is not a uniform phenomenon" (Bradley, 2000: 64). The position of the petroglyph sites is governed by choice. By examining the distribution of the sites once they have been dated, it will be possible to approach the question of why the petroglyphs are where they are. Generally, the distribution of the rock-art and its relationship to the landscape of the Eastern Desert has been neglected. This is also the case with much of Egyptian rock-art, since a great deal was recorded in rescue expeditions, or as in the case of the EDS and RATS, carried out by teams unconnected to an academic institution. Because two wadis are direct routes to the sea, a reasonable assumption is that some of the rock-art is related to journeys to the Red Sea. However, there are thirteen other wadis and most of the petroglyphs are located in these wadis, which are not direct west-east routes. In Chapters Four, Five and Six the animal, human and boat images are described wadi by wadi. The ability to date many of these images by relation to Nile Valley motifs, or through association, allows conclusions to be drawn in Chapter Seven regarding the popularity of routes, and suggest reasons for clusters of rock-art over Egyptian history.

It is also necessary to answer the questions raised by Morrow and Morrow, who were involved in editing both the EDS and RATS publications. From personal involvement in the surveys they estimated that the Central Eastern Desert rock-art is likely to be located in an area offering significant protection from the sun, on the south side of a steep-sided wadi or under an overhang (Morrow & Morrow, 2002: 13). Most of the images also seemed to them to be situated on sandstone, high quality rock surfaces within easy reach of the wadi floor in a prominent position. These contentions need to be tested. Since there is now comprehensive information regarding orientation, the issue of rock-art positioning will be determined from a wadi to a regional level. Additional questions, raised by Bradley, include whether certain surfaces are favoured or ignored, are any of these marked by particular geological features, and is there a consistent relationship between certain kinds of location and certain kinds of images?

2.7.2 Issues in Determining Distribution of Motifs in the Corpus

In order to answer these questions some potential problems in the surveys must be addressed. The corpus is composed from four different surveys and recording of site height is not consistent. Winkler (1938) never gives actual site heights, while Van Craeynest (2004) provides some general descriptions of height with a few figures. Therefore, some site heights in Wadis Baramiya and Qash are lacking. On the other hand, both Rohl (200), and Morrow and Morrow (2002) generally include site heights. Thus, details of more than 95% of sites are available.

Regarding orientation the situation is positive, since all four surveys invariably state which side of the wadi on which a site is located. They also usually contain information concerning whether petroglyphs are found on a main cliff face, under an overhang or on a boulder. All the survey reports, with the exception of the four RME sites, have GPS recordings and in the case of the EDS and RATS sites have been plotted on NASA aerial maps. RATS added the RME Winkler sites to these maps.

Although some site heights are not provided, only the four sites from the RME expedition, which were not re-recorded later, necessitated reference to archive photos. These and some sites in Van Craeynest's Wadi Baramiya work mean that an estimation of the height of a site must also be determined from illustrations. So, for those sites in Baramiya not recorded or inspected by this author there are some gaps. However, Baramiya conforms to the pattern in

the wadis that the most suitable and accessible rock surfaces are at a low level. It is therefore likely, given that 80% of sites are 'Low' (and 60%) at eye level in the corpus, that many of the sites where a height is not given are at a low level.

Despite the variety of sources used to construct the overall corpus, any inconsistencies between the surveys in recording the location of motifs can be overcome. Hitherto, dating and describing the temporal layout of the sites in the Central Eastern Desert has been problematic due to the lack of a comprehensive corpus covering the whole of the Central Eastern Desert. The bringing together of the surveys carried out in the Central Eastern Desert permits a regional examination of the material. In Chapter Seven the distribution of the petroglyphs will be outlined over the northern, central and southern regions. The character of each wadi and of each of the three regions can be described in terms of dating, orientation, location at or near features such as side wadis, and in relation to mineral resources and routes to the Red Sea.

2.8 Interpreting the Central Eastern Desert Petroglyphs

2.8.1 Previously Suggested Motivations for the Rock-Art

It has been suggested that many Nile Valley artefacts associated with the elite, such as knife handles and palettes, and also the Gebelein Linen and Tomb100 painting which will be linked with the rock-art in this study, represent politico-religious activities carried out by the ruler. In particular, they are seen as parts of, or at least precursors to, the Heb-Sed or 'Jubilee Festival' (Williams & Logan, 1987). I will examine these motifs in Chapter Eight from two perspectives. First, are these scenes likely to represent the precursors of dynastic festivals on their own terms? Secondly, can a persuasive link between these valley scenes and the rock-art tableaux be made, and if so, what explains them? Concerning religion "with the exception of funeral rituals implemented to guarantee life in the hereafter, religiousness is difficult to detect in the archaeological record" (Huyge, 2000: 193). Therefore, funerary connections will be explored. Since solar religion has been suggested as a motivation for the petroglyphs, and especially regarding boat images as 'barques' (Červíček, 1986, 1993, 1998; Huyge, 2000; Wilkinson, 2003), this contention must also be examined.

This thesis represents the first attempt in detail to explain the motives for the creation of the Central Eastern Desert petroglyphs within the context of a comprehensive corpus. Previous suggestions have used partial surveys-relying on Winkler (1938), such as Červíček (1986,

1993,1998), and have been based mainly on sites near the Nile Valley (Huyge, 1995; Darnell, 2002, 2009) or carried out without detailed examination of a comprehensive corpus which had not yet been assembled (notably Wilkinson, 2003). Moreover, all of these attempts have used the retrospective method of looking for the origins of dynastic religious iconography back in the Predynastic. Using pharaonic concepts as an interpretative key fails to understand people in the Predynastic on their own terms, and to distinguish between contextually and retrospectively-derived interpretation. This study departs from explanations based upon cosmology, starts with the evidence of the petroglyphs, and takes a synchronic approach to interpretation of the rock-art scenes.

2.8.2 Establishing a Synchronic Approach to Interpretation-The ‘Associated’ and ‘Integrated’ Scenes

In order to establish a synchronic approach, reference will be made in particular to where predynastic images are in ‘Associated’ or ‘Integrated’ scenes. The former refers to groups of boats and/or human figures and/or boats are closely aligned with the same patination (Figure 2.22). The latter include scenes where these images are mixed together as a coherent and contextualised tableau (see Figure 2.18). These latter scenes produce what are termed here ‘impossible combinations.’ Where boats, mixed animals such as climbers and grazers, and sometimes even examples of crocodile and hippopotamus hunting with ‘arms raised’ figures are found together in a tableau, these are not representations of what could have actually occurred in real life. They constitute ritual activity- “the minimal criterion of ritual action being that it is always distinguishable from pragmatic rationality and follows rules that do not necessarily lead to a utilitarian result. It is therefore to be expected, as far as the image is concerned, that certain elements are out of tune and unlikely in the context of a scene” (Graff, 2011:14).



Figure 2.22. ‘Associated’ site, SAL-7, author’s photo

Reference has already been made to Nile Valley media in order to date the petroglyphs. By establishing parallels on Naqada culture objects such as pottery, the Gebelein Linen, Tomb 100 painting, and other grave goods reference can be made to predynastic funerary practices in order to connect these with the Central Eastern Desert petroglyphs. In order to accomplish this, the images are placed within the context of the desert as a social landscape and focus on the significance of hunting. Moreover, given the presence of the ‘arms raised’ figures both in the desert and on C and D-Ware pottery, it is necessary to decide whether they represent celebrations of victory or a form of dance, and explain their presence and purpose.

The presence of boat images deep in the desert, and of the ‘arms raised’ figures in the rock-art, is striking. The first step to explaining their presence is to examine the stylistic parallels on Nile Valley artefacts, then to link the use of these motifs in funerary contexts in the valley to related ones in the rock-art. The predynastic rock-art shows a close connection between hunting scenes, boats and ‘dancing’ figures. In order to explain this connection between normally non-associated images, the approach taken in this study is to examine how this is accomplished by the idea of the hyper-image and an object being charged with power. This is applied to the amalgamation of Nilotic and desert motifs present in the rock-art and on valley funerary media in order to explore the relationship between the petroglyph creators as actors on the material object of the rock face. In Chapter Eight this study maintains that much of the predynastic rock-art is firmly connected to funerary practice in the Naqada cultures of the Nile Valley. With the exception of the Gebelein Linen and T100 Painting, we lack much of the early communal ritual context. Therefore, I look for how the desert and valley images are connected within elite Naqada I and II practice.

2.8.3 Establishing a Synchronic Approach to Interpretation-The ‘Late’ Scenes

Regarding the pharaonic and later motifs, although there are as many sites with these ‘Late’ images in the survey area, there are fewer boat and other images than those which can be dated to the Predynastic. In the pharaonic era the Eastern Desert was exploited for its economic resources, such as stone and especially gold. There are also depictions of the god Min and Horus falcons. Thus, the distribution of these dynastic images may be related to the location of the mineral resources and trade routes, and these routes will be traced in order to determine whether this is the case. The location of gold mines, quarries and wells are known in order to accomplish this. In pharaonic times the desert was seen as a dangerous and,

indeed, hostile place. The later motifs will therefore be explained within this context, where the need for support of the gods for safe passage may have motivated some petroglyphs.

2.9 Conclusion

This study presents as comprehensive as possible a corpus of the Central Eastern Desert rock-art. The lack of one has hitherto prevented a detailed analysis of the petroglyphs' distribution and hindered their interpretation, as demonstrated by the 'Genesis Debate' in the Cambridge Archaeological Journal. Although the four surveys utilised here were separated by a considerable period of time, the use of the same recording techniques by the EDS and RATS expeditions, the core of the material, provided considerable continuity. Thus, weaknesses in the surveys outlined by professional Egyptologists can be overcome, albeit with the caveat that the totals of each type of image represent minimums of their number.

Few problems were presented in identifying species of animals, with the exception of 'crocodiles.' However, due to the technique of pecking, which was used for the vast majority of the petroglyphs, identifying sub-species-for example, different types of dogs, is problematic. For the same reason, regarding human figures, gender is particularly difficult to identify. But in addition to a typology based mainly on body shape, the identification of accoutrements such as plumes and weapons, and also the activities in which the figures engage, provide a foundation for interpretation of their presence. Regarding boats, the typology of five items solves the problem of too many different types with too few examples.

Regarding dating, the impossibility of utilising scientific absolute dating methods means that the use of stylistic comparison is necessary. This study identifies motifs seen in the Nile Valley, mainly boats and the 'arms raised' figures on C/D-Ware pottery and in pharaonic tomb reliefs. Although only a small number of rock-art vessels can be individually dated by this means, the association of many boats in compositions allows the dating of half the boat images, and from this base also the animal and human petroglyphs integrated in or associated with, the boat scenes. Through dating of sites either to the predynastic or pharaonic periods, the distribution of activity and of routes through the desert can be plotted. This study eschews the method of retrospective interpretation which has a long history in attempts to understand predynastic motifs and employs a synchronic approach in order to understand the purpose of the 'impossible combinations,' especially in the 'Integrated' scenes. It provides a link

between the rock-art on the one hand, and Nile Valley material and funerary activities of the Egyptian elite on the other.

Chapter Three

Environment and Landscape

3.1 Introduction

This chapter outlines the geography, geology and environment of the Central Eastern Desert, and their effect on the content and distribution of the petroglyphs found there. It aims to provide the geographical context for studying the animal, human and boat petroglyphs. The environment in prehistoric and historic times is examined here in order to determine which fauna would have survived and therefore could have been represented in the petroglyphs. This will also aid in dating the images and determining the motives for people travelling in the desert. The geography of the survey area is examined to identify routes through the desert and suggest why the rock-art is located where it is. Firstly, the extent and topography of the survey area are described, especially the character of the wadi system. Secondly, water resources are described: from rainfall, water available in aquifers and rock pools, and also the vegetation available to support animals and human beings. Thirdly, evidence of the climate in the predynastic and pharaonic periods is examined to determine to what extent the Central Eastern Desert could sustain life during the period of the petroglyph creators and how conducive to various fauna. Fourthly, fauna depicted in the pharaonic record are noted in order to trace in the historical record their survival or disappearance compared to earlier examples shown in the petroglyphs. Fifthly the wadis are examined as habitable areas and provision of routes through the survey area. Finally, there is an assessment of whether the floor levels of the wadis have changed, some surfaces have been rendered inaccessible and others uncovered. Previous attempts at dating Egyptian petroglyphs have focused on determining levels at which images of similar date are present and this approach is dealt with in relation to the Central Eastern Desert.

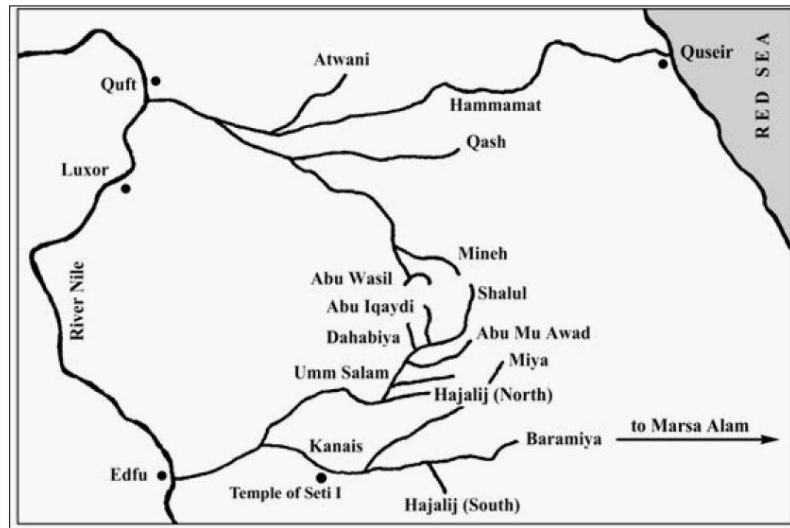
3.2 Geography and Geology of the Survey Area

3.2.1 Extent of the Survey Area

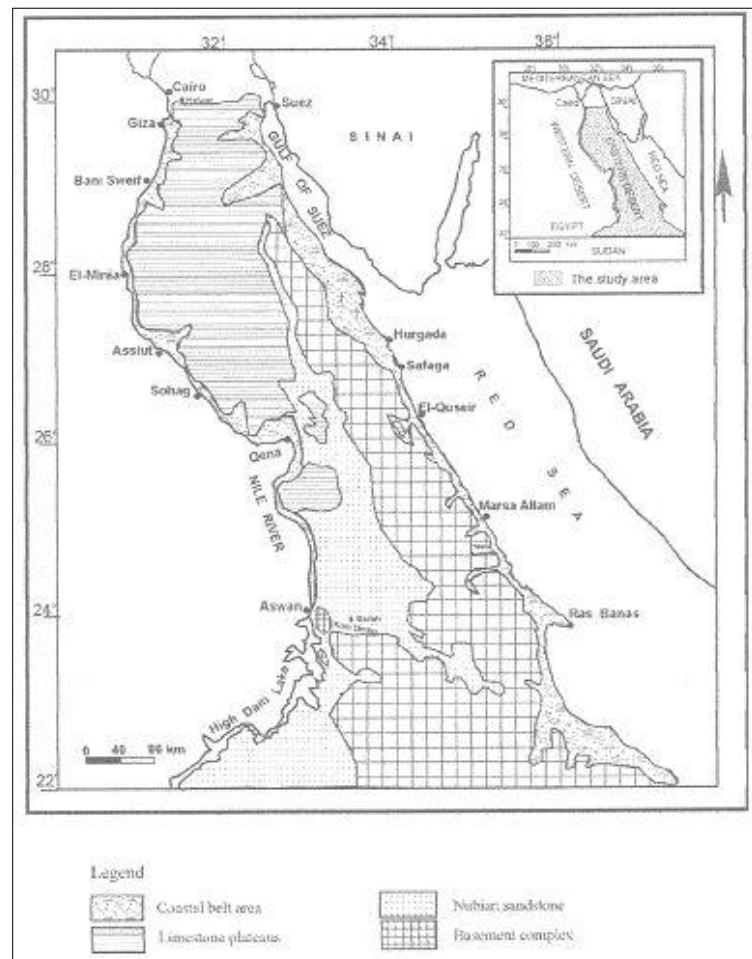


Map 3.1. The Central Eastern Desert, aerial view, Google

Most of the petroglyphs in the survey area are found within a zone bounded by the Wadi Hammamat-Quseir road in the north, the Red Sea hills in the east, the Nile Valley in the west and the Wadi Baramiya-Mersa Alam road in the south. This forms a rectangle 125 by 50 km (6,250 sq km) 25-26° N/33°-33° 45' E (Maps 3.1 & 3.2). The survey area mainly consists of a sandstone band separating the limestone of the Nile Valley and the Pre-Cambrian limestone of the high desert and Red Sea Hills (Map 3.3) (Moneim, 2005: 417). The fifteen wadis (valleys) in the survey area are, from north to south: Wadi Atwani, Wadi Hammamat, Wadi Qash, Wadi Mineh, Wadi Abu Wasil, Wadi Dahabiya, Wadi Abu Iqaydi, Wadi Shalul, Wadi Abu Mu Awad, Wadi Umm Salam, Wadi Umm Hajalij (North), Wadi Miya, Wadi Baramiya, Wadi Kanais, and Wadi Umm Hajalij (South) (Map 3.3). Wadi Hajalij (S), Wadi Dahabiya, Wadi Abu Iqaydi and Wadi Shalul run north-south, the rest are orientated approximately east-west except for El Atwani which curves round to the north-east. The survey area is divided up here into three regions. Northern wadis considered include Atwani, Hammamat and Qash (3 wadis-37 sites, 15% of all sites), Central wadis: Mineh, Abu Wasil, Dahabiya, Iqaydi and Shalul (5 wadis- 80sites, 32.5%), and Southern ones: Abu Mu Awad, Umm Salam, Umm Hajalij North and South, Miya and Kanais (7 wadis-129 sites, 52.5%) for a total of 246 sites.



Map 3.2. The 15 wadis with petroglyphs in the Central Eastern Desert



Map 3.3. Geologic map of the Eastern Desert, after Moneim, 2005: 418

The whole of the Eastern Desert is approximately the size of Italy or Montana, but the central part where the EDS/RATS surveys were undertaken constitutes 2% of it. This sandstone escarpment (see Map 3.4 & Figure 3.1) ends approximately half-way across the survey area. Although there are a few pharaonic inscriptions at wells and mines beyond this point in the Wadi Sigdig, at Bakariya north-west of Bir Baramiya (Tratsaert, in press), and some Horus falcons and dynastic boat motifs at Bir Abra q to the south-east (Field, 1955), the predynastic petroglyphs are limited by the eastern edge of the escarpment. There are very few in the limestone zone immediately to the east of the Nile, especially those leading from Luxor/Thebes. Here, cobbles and boulders litter the wadi floors making walking uncomfortable. Moreover, the crumbly rock is not suitable for petroglyphs and there are no wells. On the other hand, the Wadis Hammamat and Abbad/Kanais are wider and their sandy floors make walking easier. Thus, Hammamat and Baramiya were the main convenient entry gateways into the desert, rather than other points along the Nile. A day's walk in from the Nile, both north and south, are respectively Qasr al Banat (HAM-1; Wadi Hammamat, Figure 3.2) with a large rock giving shade and Kanais Temple (Wadi Kanais, Figure 3.3) with shade and water. The only other entry point into the desert indicated by petroglyphs is Wadi Sharab, which connects El Kab with its concentration of Naqada I and II images (Huyge, 1995) with Wadi Kanais and has only three early boat petroglyphs (Červíček, 1974: Abb. 426/427, 463).

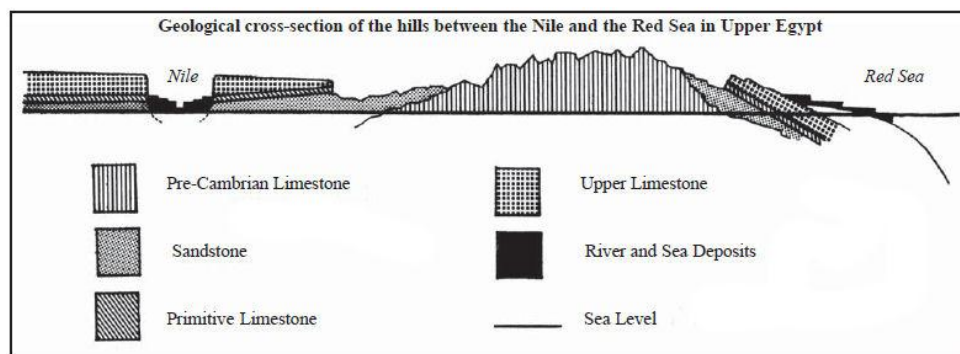
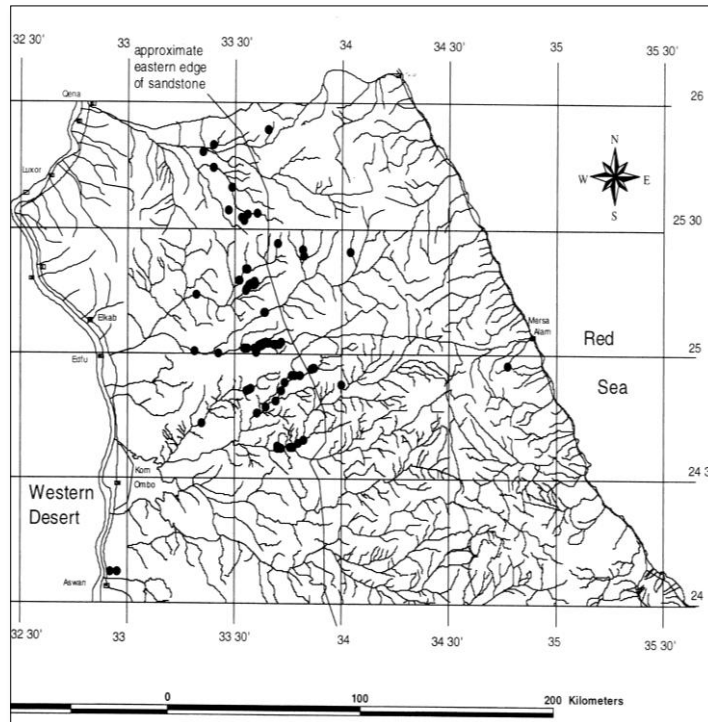


Figure 3.1. Cross-section of the Eastern Desert, after Arkell & Sandford 1928, Morrow & Morrow, 2002: 12



Map 3.4. Eastern Desert showing inscriptions and edge of sandstone escarpment-Central Eastern Desert area shown between 25 & 26 ° N, Kom Ombo drainage basin from 24° 30 to 25° N, Rothe, 2008: 397



Left: Figure 3.2. Shaded boulder with proliferation of petroglyphs, HAM-1 Wadi Hammamat, also easy walking & shade, both author's photos, Right: Figure 3.3, Kanais, KAN-2 near temple of Seti I & well to east, with easy walking & shade

3.2.2 The Wadi System

The Central Eastern Desert landscape is a series of hundreds of wadis draining fan-like into the Nile Valley, in contrast to the often wide expanses of the Western Desert which include the Sand Sea. In addition to the short wadis draining (rare) rainfall runoff from the western edge of the Nile Valley plateau edge are the major wadis, which

describe a tendril-like pattern. In some places, as in the northern Wadis Qash and Zeidun (Figure 3.4), which approach the central sandstone area from the east, the wadis are wide and open. While these wide wadis are free of obstructions such as boulders, sand dunes, they generally have only a few surfaces suitable for petroglyphs. In the south where the Wadis Baramiya/Kanais, cross the sandstone block, and open out into Wadi Abbad just beyond Kanais Temple, they do so abruptly. Kanais Temple marks the western boundary of the petroglyphs. In other wadis, such as Umm Salam, Hajalij (N) and Atwani (Figure 3.5), the routes are narrow and restrictive. The wide wadis are free of blockages such as large sand dunes and boulders, and allow easy movement. Narrow ones are either, like the Wadi Atwani, strewn with rocks deposited by massive floods in far antiquity, or free of obstacles and easy to traverse such as Umm Salam, Hajalij (N) and Abu Mu Awad. These wadis have high, almost vertical walls.

At many points boulders, some as large as a double-decker bus, have fallen. A smooth main face suitable for making petroglyphs often has a number of small boulders in front of it, on which there are also images. Some wadis, such as Wadi Abu Wasil, may have one branch blocked by a sand dune and another by a rock-fall. These are obstacles to modern vehicles, but would not have been impassable to travellers on foot. The quality of the walking surface under foot would have been more influential. The leader of the University of Minnesota and later EDS expeditions notes that these wadis, with their gentle gradients and relatively flat bottoms, “are the natural routes by which travellers, both ancient and modern, gained access to the plateau of the Eastern Desert” (Rothe, 2008: 5).



Left: Figure 3.4. Wide route in Wadi Qash, Right: Figure 3.5. Wadi Atwani, wheeled transport blocked by boulder field, both author's photos, 1999

3.3 Water Resources & Environment in the Survey Area

3.3.1 Water Resources: Rainfall

Today the area of the EDS/RATS surveys consists of an arid desert. Indeed, 95% of Egypt is desert. Rainfall is very low and even at the coastal site of Quseir only amounts to three to four millimetres per year (Hobbs, 1989: 4). Rain occurs rarely and is concentrated in the winter months (Moneim, 2005: 417). When it does rain there is usually a heavy concentrated cloudburst and these events are extremely localised. A limited amount of information regarding rainfall in the historic period comes from pharaonic inscriptions, Roman era writers such as Theophrastus, and modern observers Hobbs, Springuel and Rothe. A flash flood ‘miraculously’ uncovering a clean water well is reported during a quarrying expedition dispatched by 11th Dynasty King Montuhotep IV (Figure 3.6) to the Wadi Hammamat (Sidebotham et al, 2008: 68). Theophrastus reported rain at four or five yearly intervals in short showers (Cappers, 2006: 21). Hobbs (1989: 139) repeats Ma’aza Bedu informants’ experience of rainfall in 1926-32, 1951-52, 19955, 1960-61, 1968-70, and 1987-88. In 1954 a heavy rain event even flooded the Wadi Qena, on the northern edge of the survey area, devastating the town of Qena. It is to avoid the possibility of danger from a repetition that the survey teams always pitch camp on an elevated sandy area. Springuel recorded seven cloud-bursts over the Eastern Desert (1997: 80). The most recent of these was in 1996 and this time rain fell over a wide area. Although this writer has never experienced rainfall while surveying, new shoots and signs of recent rainfall in Wadis Zeidun and Hammamat in 1999 shows that there has still been some rainfall in the last ten years (Figure 3.7). Thus, such water as is available is concentrated and leads to the concentrations of vegetation in the wadis. Such concentrations may be connected with the distribution of petroglyphs and the hypothesis is tested below in Chapter Seven.



Figure 3.6. Inscription of Montuhotep IV’s expedition, Wadi Hammamat quarry, author’s photo



Figure 3.7. Evidence of rainfall 1999, Wadi Qash, author's photo

It will be seen below and in Chapter Seven that there is a connection between the distribution of the water/vegetation concentrations and the petroglyphs. The effect of the rainfall is magnified by the impervious surface crusts which direct rainfall to concentrate even further. When this precipitation penetrates deep below the wadi surface it will not evaporate. It is also available to those trees such as the acacia which have root spreads up to forty metres. The coarseness of the ground is also a factor in retaining water, as the coarser the soil, the better the water penetration. The sandy environment allows water to soak in and so shallow groundwater occurs in alluvial deposits and shallow carbonate rocks. This is then discharged naturally by springs (none currently in the Central Eastern Desert, although present at the monasteries of Saints Anthony and Paul to the north-east) and wells. These wells are depressions in the bedrock partially or completely filled with alluvium. As the run-off evaporates, the traveller digs deeper to access the water.

3.3.2 Water Resources: Aquifers

In addition to rainfall there are four main water-bearing aquifers in the Eastern Desert (Moneim, 2005: 421-5). The fractured crystalline Pre-Cambrian aquifer is productive adjacent to the Red Sea coast, is located at a shallow depth, and is recharged by rain through rock fissures (Figure 3.8). It supplies some hand-dug wells used by modern Bedouin. The Nubian sandstone Palaeozoic-Mesozoic aquifer is the most productive and extends through southern Egypt and into Libya and Sudan. It is at its most productive in the Wadi Qena in the north of the EDS/RATS survey area and varies in depth between four and forty metres. Its main content is fossil water, although it can be recharged by the rare rain events. The quality of this water is variable and can be quite brackish in places. The fractured limestone and sandstone aquifers are

productive only in the eastern part of the desert. The water quality varies from good to brackish. Finally, the Quaternary aquifer occurs along the major wadis and consists of shallow groundwater supplies held in Quaternary alluvial deposits. The quality of the water is usually good but is not plentiful, although it can be recharged by rainfall and upward leaking from deep aquifers. Thus, there are still potential potable groundwater sources available in addition to scarce rainfall for the modern traveller, the Bedu nomads, their flocks and a few wild animals. However, Moneim describes the aquifers outside of the Red Sea Hills and the Qena area as having limited potential due to their recharging only from infrequent rainfall in the desert (Moneim, 2005: 425). Therefore, the desert can only support small groups of people.

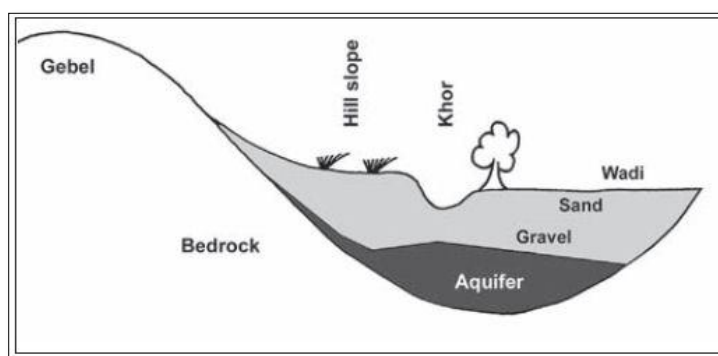


Figure 3.8. Cross-section of the wadi system & position of aquifer, Barnard, 2012

3.3.3 Water resources: Rock pools

In the survey area wadi system the scarce rain collects in pools such as at petroglyph site SAL-14, the so-called 'Jacuzzi Site' (Figure 3.9). Additionally, in November 1992 Rothe noted a tongue of water several hundred metres wide by fifteen centimetres deep making its way across the desert from the distant Red Sea hills (Rothe, 2008: 8). He also reports that water can be found after digging through one to two metres of alluvium where it is marked by a 'wusum' (tribal mark) meaning 'bir' (well). Moreover, he noted from 1994 several places where water was just below the surface, and one in the Wadi Baramiya, within the EDS/RATS survey area where it was available only ten centimetres below the surface (Rothe, 2008: 6-7). The availability of water resources even today accounts for the continuing nomadic existence of the Ababda Bedu people, albeit with one of the lowest population densities in the world of one person per ninety square kilometres (Rothe, 2008: 8).



Figure 3.9. Dry rock pool, Umm Salam SAL-14, author's photo

3.3.4 Resources: Vegetation

Vegetation in the desert has been, and remains, quite widespread in the modern period. It depends not just on the availability of water but also on the presence of a seed-bank. For example, there are often places where it is evident that rain has fallen but no growth has taken place. On the other hand, there are examples of a single tree standing alone amongst the sand due to its access to water (Figure 2.10). In some wadis, vegetation may be prolific along one side and totally lacking on the other. This can be found at WAS-10 (RME-26) in Wadi Abu Wasil. Here, the side with the main 'chieftains' site is dry and devoid of vegetation, while there is considerable vegetation on the other where there are several additional petroglyph sites (Figure 2.11). Thus, there are concentrations of rock-art associated with vegetation visible even today. It is also notable that in wadis such as Umm Salam and Abu Mu Awad the petroglyphs peter out once there is no vegetation. This is explored further in Chapter Seven.



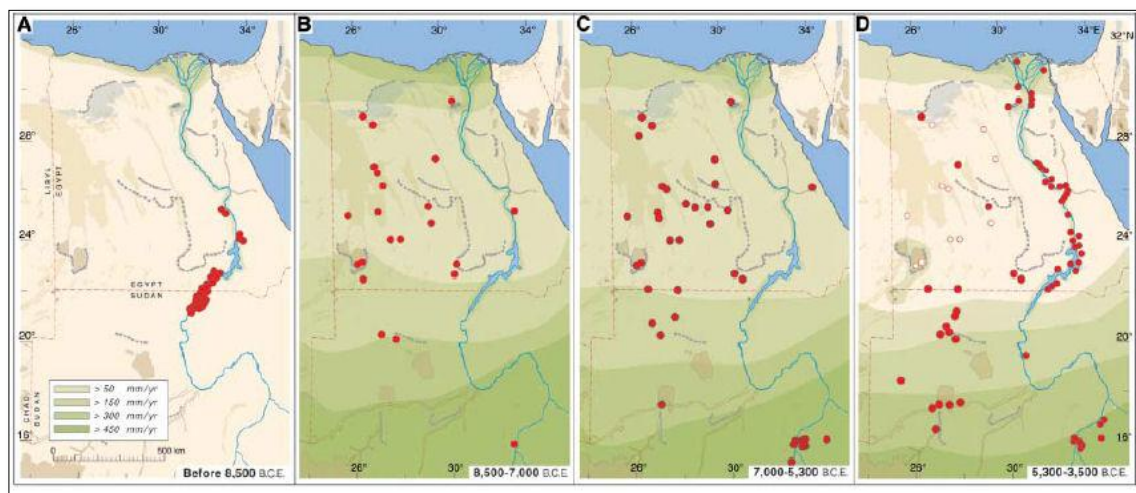
Figure 2.10. Isolated bush near wadi wall, Umm Salam, close to SAL-14 (the 'Jacuzzi' site), author's photo



Figure 2.11. Vegetation at WAS-10, author's photo

The vast majority of studies of the flora and fauna of the Eastern Desert are limited to the areas near the Roman mines such as Mons Porphyrites or sites near Berenike, to the north-east and south-east of the EDS/RATS survey area, where archaeological excavations continue. Trees such as acacia, and nabq (*Ziziphus Spina-Christi*), both indigenous to the area rather than being imports from the Nile Valley or exotics from abroad, can be found in the wadis, in addition to sixteen species of grasses. Most of these produce “a substantial amount of biomass for grazing” (Cappers, 2006: 30). In the wadis near the Roman sites an average of thirteen ephemerals and perennials have been found and plant cover varied from 10 to 85% of the ground surface (Cappers, 2006: 30). These inventories were made after quite heavy rainfall. So they may be an indication of the greenery which would have been present in a moister prehistoric climate.

3.4 Climate in the Predynastic and Pharaonic Eras



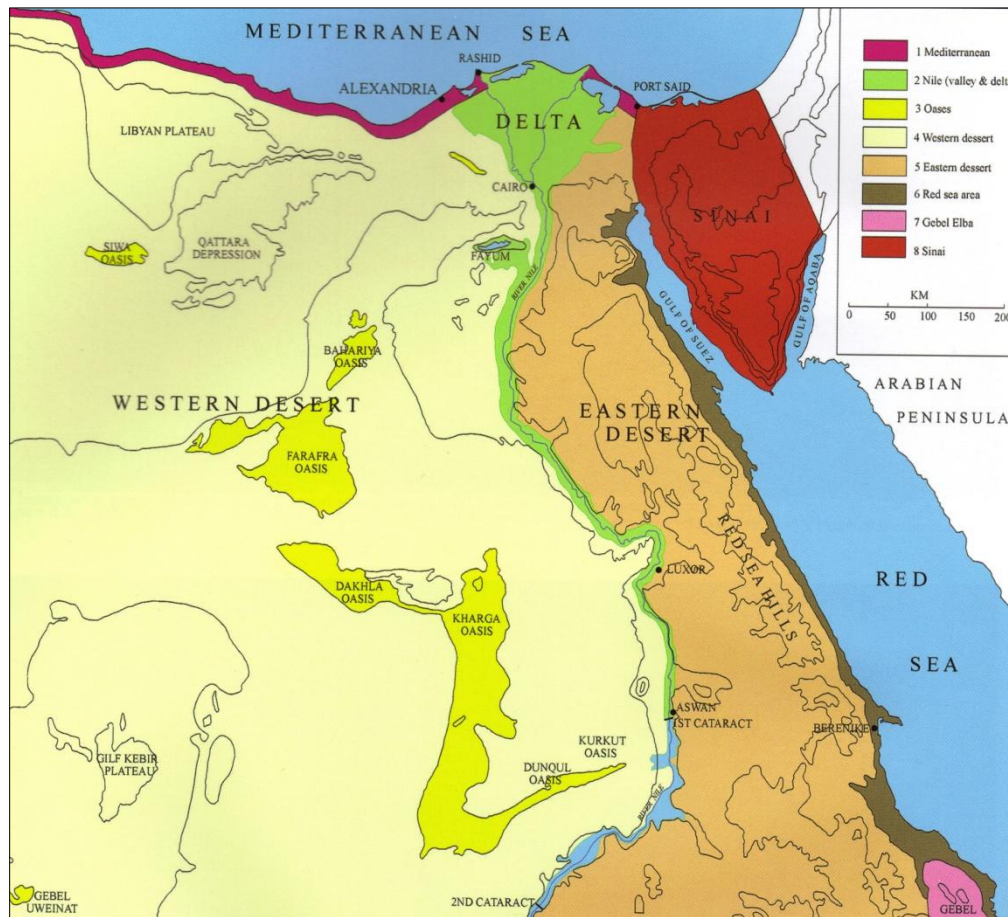
Map 3.5. Settlement in the Sahara & Nile Valley 8500-3500BCE, Kuper & Kröplin, 2006

The climate has been changing over the last ten thousand years and this had an effect on the environment in Egypt. Major work has been undertaken in the Western Desert, particularly by the German-based Heinrich-Barth Institute, regarding climate and the environment. Interdisciplinary data collected by archaeologists, botanists, ethnographers and geographers collaborated in the ACACIA (Arid Climate, Adaption and Cultural Innovation in Africa) Project (Bubenzer *et al*, 2007). They have established patterns of climate, migration and settlement over the past ten thousand years. There has been considerable discussion concerning the Sahara during the Holocene, tracking periods of humidity and aridity. Therefore, this information can be applied to Eastern Desert sites at the same latitude. There is also useful information from a small number of excavations of sites active in the Roman period on the fringes of the survey area.

Regarding the past twelve thousand years there is a consensus (Brooks 2005, Butzer 2001, Claussen *et al* 1999, Cremaschi & Lernia 1999, Kuper & Kröplin 2006, Hassan 2002) about the climate of the Sahara. This stresses both a change in the Earth's orbit and environmental feedback as factors leading to aridification, although Egypt always had a dry climate during this period. This research applies primarily to what is now the Western Desert extending to the Fezzan, Akkakus and Tassili, and south into Sudan. Claussen (1999) outlines two abrupt episodes, the first between 4700 and 3500 BCE and the second from 2000 to 1600 BCE in a longer process of gradual

aridification. Overall, a change in the tilt of the Earth at 8200 BCE caused weaker ‘insolation’ (solar heating) of the North African landmass and therefore a weakening of the West African monsoon. The orbital effect was probably enhanced by the collapse of the North American Laurentide ice sheet around 6000 BCE. Computer modelling shows a feedback between subtropical vegetation and precipitation. Grasses and other plants no longer collected water, releasing it back into the atmosphere. The result was a rapid decrease in vegetation. This turned the area of what is now the Sahara into arid desert within only a few hundred years after the second aridification event. At that point the Eastern Desert reached the climate situation at which it is today, although it probably now has fewer trees due to charcoaling by the local Bedouin.

The effect on settlement and economy is outlined by Kuper & Kröplin (2006) and comprises four phases. Firstly, there was no permanent human settlement (outside the Nile Valley) in the Sahara, although there were nomads active, until the arrival of monsoon rains in around 8500 BCE. At that time the Sahara Desert extended four hundred kilometres further south than it does today (A in Map 3.5). Then, the rains turned the Sahara into an attractive landscape and therefore conducive to settlement (B in Map 5). Next, after 7000 BCE cattle pastoralism became established together with widespread human settlement (C in Map 3.5). Finally, from 5300 BCE the monsoon rains retreated southward to the pattern they occupy today, and apart from in the oases permanent settlement in Egypt was restricted to the Nile Valley (D in Map 3.5). By 3500 BCE desert conditions were established and even favourable areas such as the highlands of Gebel Uweinat and the Gifl el Kebir (Map 3.6) were no longer permanently occupied. Water supply magazines had to be established in the Fourth Dynasty on the Abu Ballas trail to the Gifl in order for mineral and trade expeditions to take place. Egypt was divided into the ‘Black Land’ of the narrow Nile floodplain and the ‘Red Land’ of the desert. However, there was still further gradual aridification until the final event around 2000 BCE, and the establishment of the arid conditions which exist in modern times.



Map 3.6. Showing the regions of Egypt, valley & deserts and location of the oases & the Gilf Kebir/Gebel Uweinat, Cappars, 2006: 208

3.5 Predynastic and Pharaonic Fauna

3.5.1 Faunal Bone remains

Animal bone remains in the Gilf el Kebir indicate what Faunal were present in the moister climate periods. The Neolithic Wadi Bakht sites in the Gilf have evidence of giraffe, antelope, addax, oryx, gazelle and hare as well as domestic cattle, sheep and goats (Lindstädter & Kröpelin, 2004). Linstädter and Kröplin propose that monsoon rains typical of the early Holocene, 8400-4400 BCE fell during the daytime. Due to high evaporation rates these actually produced less grass than the night-time but less substantive rainfall in the terminal phase of the Holocene ‘pluvial period’ 4400 to 3500 BCE. The winter rains were also steadier and had “substantially lower surface run-off rates” (Lindstädter & Kröpelin, 2004: 774). So the amount of rainfall was less significant than its distribution in producing exploitable grassland. In the later stages this area was more conducive to a nomadic pastoral economy. This activity then had

to be abandoned due to final aridification of the Eastern Sahara around 3300 BCE. Rainfall even before 3500 BCE cannot have been heavy, and outside the Gilf massif may not have reached a 100-150 millimetres a year. According to Kuper, Egypt had a desert-like environment in the Middle Holocene and thereafter, “though with a much denser plant cover than today and precipitation probably never exceeded 50-100 mm” (Kuper, 1993: 167). Palaeobotanical work by the ACACIA Project, especially concerning acacia charcoal, supports this suggestion with an estimate of about a hundred millimetres of rainfall per year (Bubenzer et al, 2007: 22).

3.5.2 Fauna in the Predynastic and Pharaonic Eras

The pharaonic artistic record can also be examined in order to identify which animals were present during particular historical periods (see Chapter Four). It may then be possible to match fauna in the predynastic and pharaonic media with the petroglyphs in order to date them. In the predynastic era many of the palettes, pots and ivory carvings on which animals are depicted lack provenance and are often difficult to date. C and D-Ware vessels do show a range of animals: elephants, lions, giraffe, ostrich, ibex, addax, gazelle, cattle, scorpions and dogs as well as riverine crocodiles, hippopotami, fish and turtle (Graff, 2009). Goats and pigs are not seen in either predynastic or dynastic media, although they are attested from faunal remains in the Nile Valley. All but fish and turtles are found in the desert petroglyphs, although lions are extremely rare and probably late examples. In pharaonic tomb paintings from the Old Kingdom onwards, the representations may be an authentic portrayal of the extant fauna or symbolic in nature, representing an activity which the deceased was expected to participate in, rather than something he actually did. Paintings of the Fifth Dynasty sun temples at Abu Sir show royal hunting of animals which were captured and contained in enclosures (Figure 3.12-Strandberg, 2009: 54). These could be imports by trade or tribute from Nubia in the moister south. On the other hand, since hunting scenes are omnipresent in the petroglyphs over a long period, some of the animals may have continued to be sourced from the Central Eastern Desert.

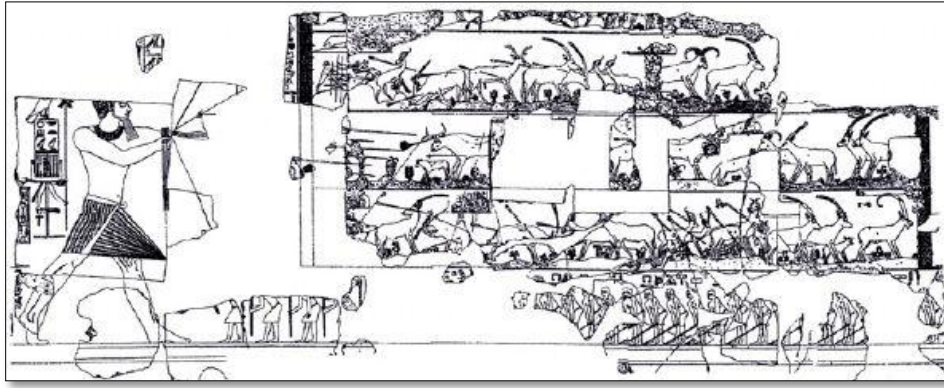


Figure 3.12. Deceased king hunting desert animals, Sun temple of Sahure, Dynasty V, Abu Sir, Strandberg, 2009: 54

In the course of surveying pharaonic artistic depictions Butzer (2001) traces the process by which some animals continued to be represented, while others fell out of the record. In the fourth millennium BCE large animals such as elephant and giraffe are shown, which are “flood-plain dependent” (Butzer, 2001: 386). Wild cattle, leopard and (rare) rhinoceros are also present. In the predynastic media, there are also semi-desert ‘runners’ such as oryx, addax and gazelle and ‘climbers’-ibex and barbary sheep (which have continued into modern times. Apart from the rhinoceros and leopard these are therefore all common in the petroglyphs. Desert edge species such as lion, jackal, hyena and ostrich are all shown on artefacts, but only the ostrich is commonly depicted in the petroglyphs. The assumption is that increased sedentism, in addition to aridification, during the Naqada I period would have led to human-animal competition and that these fauna would have been hunted out or forced further south.

During the Old Kingdom (2700-2200 BCE) lions and Barbary sheep become rarer in the Nile Valley depictions and large fauna disappear (only reappearing in the New Kingdom as imports from Nubia). Oryx, gazelle, addax and ibex continue to be commonly shown. Butzer notes that during the Middle (2040-1782 BCE) and New (1570-1070 BCE) Kingdoms, there was a further shift towards desert-adapted animals being represented with gazelle, oryx and ibex present, but the latter two declining in frequency. Thus, “from the animal portrayals, a progressive aridification of the environment beyond the floodplain is suggested, in conjunction with partial or complete elimination of small populations of the larger animals-the elephant, giraffe and lion-by hunting” (Butzer, 2001: 386). Illustrations in the Fifth Dynasty sun

temples and pyramids show the nearby wadis of the Western Desert with shrubs, acacia and sycamore trees in addition to gazelle, addax, wild cattle and ostrich and such scenes continue into the New Kingdom (Strandberg, 2009). The Central Eastern Desert vegetation continues to this day and has supported ostrich, gazelle, ibex and oryx into modern times. The conclusion is that large animals such as giraffe and elephants had disappeared from the desert by the pharaonic period. We should thus expect to see these animals when drawn as seen in the survey area only in the predynastic period. Any dated to the pharaonic era and later will be examples viewed in the Nile Valley or perhaps being traded from further south in Africa.

3.6 The Wadis as Habitation

3.6.1 Animal Habitation

Even today there is a small population of nomads grazing their flocks on the vegetation sustained by the aquifers and the sparse and infrequent rainfall in the Central Eastern Desert. In addition, there are still ibex in the desert today. These thrive in rocky conditions and there are also a few gazelle, which can satisfy their water requirement from vegetation. Considerable depredation of the fauna has taken place, but at the hands of Gulf and Egyptian hunters with modern weapons and this has occurred only in the last twenty-five years (Hobbs, 1989). If we add the prolific ibex and the other fauna in the petroglyphs in the Eastern Desert to the wild fauna from the Gifl and Western Desert, then the populations in both areas were very similar.

Cattle, sheep and goat remains from the Neolithic are present in the Sahara and the Gifl (Zboray, 2006 & 2009) and Iheren (Holl, 2000) petroglyphs show numerous cattle motifs. There are many domestic sheep and goat images, especially at the Saharan sites at Iheren and Tassili, unlike the situation in the Central Eastern Desert where only a few wild Barbary sheep are shown. Evidence from the Sodmein cave and the 'Tree Shelter' (Vermeersch *et al.* 1994 & 2002) in the Red Sea mountains, fifty kilometres from Quseir to the north-west of the EDS/RATS survey area, indicates that ovicaprines were present from just after 5000 BCE, based on four intact skeletons, two of which have been positively identified as goat, it is suggested goats were introduced via the Levant. Visits to the cave were intermittent. However, as

previously stated, herds of domesticated sheep and goats are absent from the petroglyphs in the EDS/RATS survey area. Indeed, no domesticated ovicaprines can be identified with confidence.

At the 'Tree Shelter' Holocene human occupation is noted at the same time as a wet period from 6300 to 5700 BCE. Lithics from the El Kabian complex are present at the Sodmein Cave and thus indicate a different culture in occupation from 5800 BCE (Vermeersch *et al.* 2002: 124). Butzer notes unusually rapid alleviation from about 5950 to 5250 BCE in this area and six species of trees including acacia, tamarisk and wild olive (Butzer, 2001: 387). Occupation of the Sodmein Cave ended around 4,100 BCE, while it continued at the 'Tree Shelter' until about 3000 BCE. Economic activity is identified at the latter as being mainly hunting (gazelle), fishing and hide preparation (Vermeersch *et al.* 2002: 135). The authors suggest that the climate in the Eastern Desert was too dry for cattle herding.

3.6.2 Human Habitation

Particular evidence of human settlement in the Eastern Desert has been found at the excavated 'Tasian' culture burial site at Wadi Atulla north of the Wadi Hammamat and west of the Sodmein Cave. AMS dating of the remains gave a date of between 4940 and 4445 BCE (Friedman & Hobbs, 2002: 178). Distinctive pottery belonging to this culture has been found in the Wadi Hammamat near Bir Laqeita (Debono 1950, 1951), possibly at Ras Samadi on the Red Sea coast (Murray & Derry, 1921), in the Western Desert at Gebel Ramlah west of Nabta Playa (Schild & Wendorf, 2001)-also in the Wadi el Hol forty-five kilometres west of Thebes (Darnell, 2002), perhaps at Dakhla Oasis (Hope, 2002), and in the Nile Valley at Deir Tasia from which the culture gets its name. A number of Tasian beakers are also reported in Sudan from the Dongola Reach and further south, and Friedman suggests a connection via desert corridors to Egypt because of the lack of beakers in Nubia (Friedman, 2002: 189). She identifies the Tasian culture as a desert culture and notes that neither desert nor river constituted barriers to the wide-ranging movement of the Tasian cultural unit. Unlike Naqada I and II pottery, Tasian vessels are not decorated with humans, animals or boats but are either plain or have incised and impressed decorations. Those at Wadi Atulla were made of local, desert sourced clay. Several showed signs of mending and

were therefore probably highly prized. Beads of local soapstone were recovered as were numerous pieces of malachite and red ochre presumably used for body decoration. The Gebel Ramlah burial material includes sea shells, in addition to lip plugs and beads of carnelian and turquoise, showing a connection with the Eastern Desert and the Red Sea.

Archaeological evidence of the Naqada Nile Valley civilisation is found only in the Wadi Hammamat in the north of the Central Eastern Desert. Some Naqada I and II pottery from graves at Laqeita (Debono, 1950, 1951) and a single black-topped sherd seen at WAS-10/DR-2 (RME-26) by this writer, accounts for all of the prehistoric remains and evidence of human occupation discovered in the survey area. It comes from the north of the survey area and suggests mobile, nomadic peoples in this area in the early sixth to late fourth millennium BCE. It is not clear what population inhabited the Central Eastern Desert in the predynastic and pharaonic period before the Second Intermediate Period (c.a. 1750 BCE) apart from the possible early El Kabian and Tasian far-ranging peoples. Reference is made to the 'Medjay,' who acted as auxiliaries in the campaign against the Hyksos (Shaw, 2000: 201). In the Roman period the Blemmyes and Nobadae appear to have lived in the survey area and to its south. They are often described as savage nomadic enemies, but Blemmye settlement took place in the Dodekaschoinos, the 80 mile stretch of Lower Nubia south of Aswan (Sidebotham et al: 364-6).

Abadi Ababda Bedu, who live permanently in what is now desert, have done so for many generations. They have passed on knowledge of a wider area than that covered by the Eastern Desert Survey, all the way to the Red Sea hills and the coast. They also know the likely presence of water. This allows a small population to engage in herding camels, sheep and goats. Rothe saw flocks of sheep and goats numbering in the hundreds grazing in the high desert (Rothe, 2008: 8). Informants told him that extended families of fifteen to thirty tend these until heat and dryness leads them to split up and move to be near the mountain wells. EDS survey teams in which this writer participated have encountered Bedu on the way to the Nile Valley to sell argel and wormwood, which are both used for medicinal purposes, they have collected (Figure 3.13), and female members of a camel herding family with their 'tent' consisting of a wooden frame draped with fabric (Figure 3.14). This indicates that a

nomadic Eastern Desert population would probably have left very little trace of its presence. The only other human activity is mining which involves small teams of Nile Valley Egyptians who are resupplied from valley or coast.



Left: Figure 3.13. Bedu & donkey cart encountered Feb. 1998, author's photo Right: Figure 3.14. Bedu encampment Dec. 1999, author's photo

3.7 Routes through the Desert

3.7.1 Modern experience

Despite aridification and environmental degradation, contact with the Red Sea and travel through the Eastern Desert have remained possible and even relatively easy. This demonstrates the ease which travellers could have survived in an earlier and moister climate. Although most of the wells, apart from Birs Abbad, Kanais, Shalul, Mineh and Laqeita, are east of the sandstone area (see Map 3.4), this does not prevent journeying on foot today. In 1996 the University of Minnesota inscription project team leader Russ Rothe walked three hundred kilometres from the Nile to the Red Sea with two donkeys and their Bedu owners (Rothe, 2008: 8). Walking eight hours a day he found that it was not necessary to carry food or water for the animals. The donkeys needed to drink every other day and the wells were never more than two days' journey apart. There are four evenly spaced wells along this southern route, which is better supplied than Wadi Hammamat in the north (Rothe, 2008: 6). The February 1998 EDS expedition encountered two Bedu with a donkey cart carrying a jug, but not any water with them. If forage is still available today, it would have been even more prolific in the moister conditions of the 4th millennium. From personal observation there is a link between the presence of vegetation and that of petroglyphs. Indeed, in Wadi Umm Salam, which has the largest number of sites, (46-19%) all but one (late site) are located in the first two-thirds of its length. Not only does the rock

become more friable in the last section, but vegetation is completely absent. Travellers would not have stopped in this area to rest and perhaps create petroglyphs. Neither would hunters have found animals feeding there.

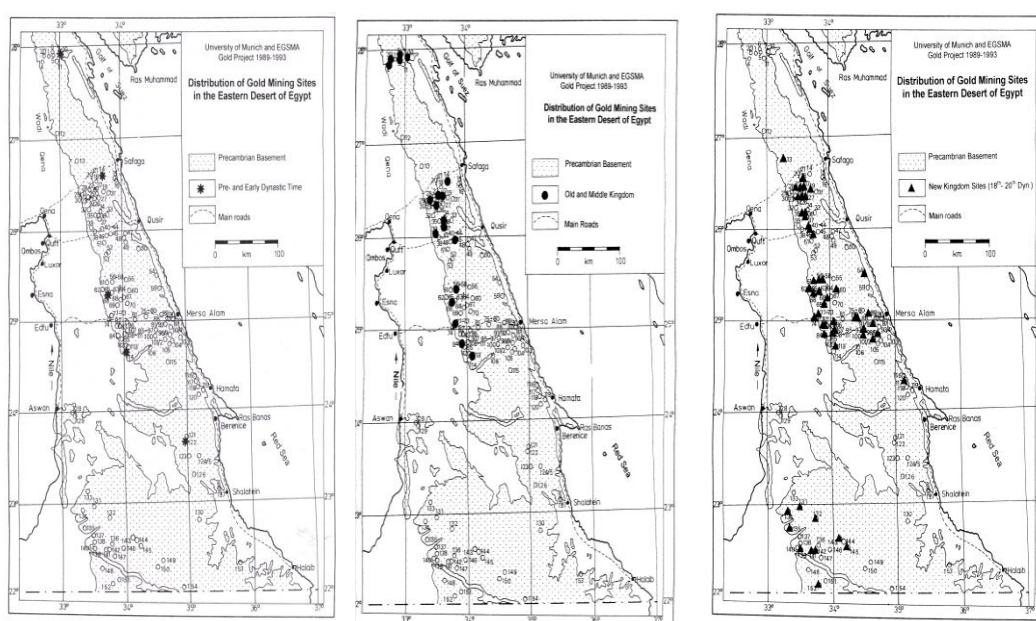
3.7.2 Pharaonic & Greco-Roman Experience

Journeying through the Eastern Desert before the introduction of the camel into Egypt in the first millennium BCE would not have been problematic, especially if travelling with guides or keeping to the main west-east direct routes along the Wadis Baramiya and Hammamat to the Red Sea. This accounts for the many inscriptions, the evidence of gold working in pharaonic times and the absence of water dumps which were required on the Abu Ballas trail in the Western Desert, even in the very dry conditions after the second aridification event around 2300 BCE. With the introduction of the camel and marking out of the Roman road with windrows, together with way-stations, cisterns and wells along the route, travel through the heart of the area was made even easier. Inscriptions at MIN-14 (RME-24b) record traders in the Roman early imperial period and there was a Roman road through the desert to Berenike on the coast (Judd, 2003). There are a number of wells which still give water along this route (Rothe, 2008: 17). Game and forage would have been available, so carrying large amounts of rations should not have been necessary. With the probable absence of large carnivores, and with water available, the only dangers would have been from the heat and any hostile nomadic inhabitants. All this suggests that movement through and even life in the Central Eastern Desert has been possible for small groups of people for many thousands of years.

3.7.3 Routes to the Gold Mines

Not only was the area attractive to hunters from the predynastic through the pharaonic era and later, the Eastern Desert was a major source of raw materials. Greywacke for palettes was sourced from the Wadi Hammamat in predynastic times and sarcophagi were carved in the Bekhen-stone quarries in that wadi to the east of the survey area. These quarries also provided stone for bowls, palettes, statues and columns, and lead, copper and galena were all derived from the Eastern Desert (Harrell, 2002; Klemm, Klemm & Marr, 2002). Moreover, there were major gold mines at Bir Umm Fawakhir in Wadi Hammamat, in Wadi Baramiya, to the east around Bir Dagbag, but also in the

desert south of Baramiya (Klemm, Klemm & Marr, 2002-Map 3.7). These mines are all on the Pre-Cambrian basement rock to the east of the sandstone escarpment. Although they are mostly beyond the main EDS/RATS survey area, they are an important feature in the Central Eastern Desert, and north and south of it. There are considerable numbers of pharaonic inscriptions in the wadis which would have been routes to these mines, including ones which contain the word ‘gold,’ and the names and titles of officials who would have had responsibility for gold and other mineral collecting expeditions (Rothe, 2008). There are also boat petroglyphs dateable to the Old, Middle and New Kingdoms.



Map 3.7. Gold mines in Left: Predynastic Era, Centre: Old/Middle Kingdom, Right: New Kingdom, after Klemm, Klemm & Marr, 2002: 222-224

Rothe (2008) concludes that Wadis Hammamat, Baramiya, Mineh and Abu Mu Awad were well-used routes for gold-mining expeditions. There are significant amounts of pharaonic petroglyphs in all these wadis, especially boat images. It has been suggested that some of these may represent the cargo ships which would transport the ore once it reached the Nile (Tratsaert, in press). In addition, the Wadi Mineh MIN-14 (RME-24b) Roman inscriptions show people engaged in trade with India moving through the desert to the coast, including the extremely valuable pepper trade (Judd, 2003). African forest elephants were also brought up from Berenike (Casson, 2003).

3.8 Height and Possible Chronology of Central Eastern Desert Wadi Floor Levels and Sites

3.8.1 Previous Attempts at Dating

It has been contended as late as 1989 by egyptologist Whitney Davis that, at least in the Nile Valley, the oldest petroglyphs were found at the highest elevations. This was based on the observation that the level of the Nile flood was gradually falling throughout dynastic times. Therefore, the oldest petroglyphs would be the highest and as the higher levels became less accessible, the petroglyph creators would work lower and lower. It was also observed at Sayala (Sandford & Arkell, 1933) that the higher petroglyphs were the most deeply patinated, due to submersion in the Nile flood, and that giraffe and elephant motifs appeared first at a higher elevation than cattle and boats. No archaeological remains have been found in a dateable connection with petroglyphs anywhere in the Central Eastern Desert. The EDS and RATS teams therefore recorded the height of each site and site component-rock surface or boulder, from the wadi floor. It was considered that site height could potentially be used as a guide based on whether the wadi floors had fallen, risen, or stayed the same over the period in which the petroglyphs were created. However, as the following section will show, this hypothesis is not supported by the evidence.

3.8.2 Wadi Floor Levels Over Time: The Effect of Flooding

In attempting to determine what has happened in the wadis, it must be noted that the wadi system itself was created millions rather than thousands of years ago, and the wadis have not constituted river beds for hundreds of thousands of years (Rothe, 2008). While some Nile floods could be high, the gradient in the Eastern Desert slopes upwards towards the Red Sea Hills. Therefore it is unlikely that sediment would have been washed in to the wadi system from the River Nile, nor would boats be floated into the desert. Flash- flooding would have occurred where run-off from heavy rainfall in the uplands rushed down east-west routes, illustrated by the 1954 Qena event. However, for those wadis in the Central Eastern Desert without a direct connection to the Red Sea Hills it is unlikely that large amounts of sediment would have been washed in and out. In wadis such as the east-west Baramiya, Umm Salam, Hajalij (N) and Mu Awad the overwhelming bulk of the petroglyphs are at or below head height, and at such a level could be made in the same locations by someone

walking in the wadis today. There is only one place in the whole survey area where it is evident the wadi floor has risen a little, at SAL-10. (Figure 3.15). Acheulean (200,000 to 60,000 BCE) hand axes have been found on the surface of low shelves in several wadi bottoms. The wear on them is reported to be minimal, suggesting that they have not been moved much by wind or water action (Rothe, 2009, personal communication). The conclusion is that the level of wadi floors has not changed much over the last 6000 years and therefore the images we see now constitute the extant corpus, with few hidden beneath the floor level except perhaps in the rare places where there are dunes.



Left: Figure 3.15 SAL-10, Site view showing rare case of wadi floor having risen over time, author's photo

3.8.3 The Effect of Wind on Wadi Floor Levels

Wind does appear to have had an influence on the topography. Although the Eastern Desert is more gravelly than the sandy Western Desert, sand dunes are created and moved within the wadi system. One of the southern routes into the Wadi Abu Wasil is blocked to vehicles by a high sand dune. In the search for Winkler's major site RME-26 (WAS-10) this therefore necessitated entering from the north. There is no way of knowing when this dune formed. Rothe notes that the wadi floor is at least three metres higher above this dam than below it. On occasion flash flooding has created a lake behind it as the dune acted as a dam. There is evidence that there has been water above the dam in the last few years as silt sediment is visible through the downstream side of the dam. From the lake bottom sediment comprised of silt to clay-sized particles can be seen showing that the lake at times extended for up to three

kilometres (Rothe, 2009, personal communication). Above the upper reaches of the lake is the concentration of petroglyph sites in this wadi of which WAS-10 (part of RME-26) is the main feature. There is still a significant amount of vegetation here. There are also structures, and sherds tentatively ascribed to the Roman period near the dam (Rothe et al., 2008: 17). There are no mines in the vicinity so the feature acted as a draw to ancient people as hunters and perhaps pastoralists in the later period.

3.9 Conclusion

The geography of the Central Eastern Desert has clearly had a major effect on the presence of the petroglyphs as they usually occur on major routes through the wadi system. The images are mainly bounded by the Wadis Baramiya and Hammamat in south and north, and by the edge of the sandstone escarpment in the east. It is the sandstone surface which has attracted the bulk of the rock-art. In addition, there are notable concentrations on routes to the gold mines, quarries and the Red Sea. It is also evident that ease of travel regarding conditions under foot and the convenience of entry in to the desert strongly governs the choice of wadis by the petroglyph creators regarding where to make images. These factors account for the scarcity of entry points opposite the central part of the survey area, and probably therefore the much lower number of petroglyphs proportionately in that area.

Although rainfall has never been extensive over the survey area, sufficient water resources have been available over the millennia to support a range of fauna due to the refilling of aquifers. Even today the water resources available in the Central Eastern Desert are sufficient to support travellers on foot, a nomadic population, ibex and gazelle. Despite most wells being located beyond the sandstone zone, and therefore outside the survey area, modern reconstruction and the evidence from Bedu travellers shows that desert travel is perfectly feasible to this day. So long as past travellers had either knowledge of routes or reliable guides, journeys would not have presented insurmountable problems. Reconstruction of the prehistoric climate and comparison with the Western Desert indicates that a variety of fauna, with the exception of large animals such as giraffe and elephant, could be hunted there over a very long period. This is reinforced by Old Kingdom tomb paintings, from which only these two examples are absent.

Even as late as the New Kingdom and beyond, depictions of a range of desert animals indicate that during the pharaonic period considerable hunting activity could have continued. Therefore, hunting scenes in dynastic tombs could represent real hunts rather than idealised activity. There has always been sufficient biomass to support grazing animals, although after c.a. 3500 BCE progressive aridification meant that the area could not support large animals. Indeed, it is notable that there have always been sufficient water resources to travel across the ‘desert’ and that this is true even today. Hunting, the main subject of the petroglyphs, has continued into modern times and is seen all over the survey period from all eras, despite two climate crises and progressive aridification over the millennia. As long as a traveller had guides, or only had to follow the Roman road, travel would not have been difficult on foot, by mule or, especially, by the use of camels. The exercise by which the whole length of the route from the Nile to the Red Sea was traversed on foot with donkeys recently reinforces this conclusion.

An overwhelming number of the petroglyph sites are located on the sandstone ridge and once one leaves this area only a few pharaonic images and inscriptions can be identified with confidence. A large proportion of sites are at low level (see Chapter Seven) and many sites either have boulders in front of a main face and/or are accessed by a sand ramp. This has had a strong influence over where the petroglyphs have been placed. The level of the wadi floors has almost certainly changed little over the millennia and the location of most of the petroglyphs can be accounted for by ease of accessibility (and as will become clear in Chapter Seven, the availability of shade and a clustering around side wadi entrances). In the narrow wadis there are more petroglyphs simply because of the ease of access to suitable surfaces to inscribe. There is also a clear relationship between the presence of petroglyphs and where vegetation is found even today. These are the locations where game animals would probably have gathered to feed, and thus attracted hunters active in the Central Eastern Desert, leading to concentrations of rock-art.

Chapter Four

Animal Depictions

4.1 Introduction

Animal petroglyphs are the most common image among the rock-art found in the Central Eastern Desert and approximately 2245 images occur at 221 sites (90%). This chapter covers the following animal motifs: 'Riverine Animals' (hippopotami and crocodiles), 'Large Animals' (elephants and giraffe), 'Canines' (dogs), 'Ungulates' (asses, ibex, antelope and cattle) and 'Birds' (ostriches). Numbers of these are summarised in Table 4.1. It analyses them by number of sites, and of images by wadi and area in order to show frequency (see Tables 4.2 & 4.3, Appendix Two). It also deals with other, rarely recorded, animals. The chapter sets out to identify the most commonly represented species, to plot their distribution in the wadi system, and attempts to assign motifs to either the Predynastic or later periods. This will permit examination of the reasons why the animals are portrayed, especially in the association of different species and the importance of hunting in the real and imagined landscape of the Central Eastern Desert. First, background information about the type (species) is given. Then, the distribution of each animal motif in the wadi system is analysed. Next, the images are dated by reference to Nile Valley images and associated dateable human and boat petroglyphs in the desert. Finally, an overview of the images is given as a basis for examining the regional distribution of all the motifs (Chapter Seven) and to explain the reasons for their creation (Chapter Eight).

Animal Class	Animal	Number	Percentage
Riverine	hippopotami	30	1.3%
	crocodiles	47	2%
'Large'	elephants	43	2%
	giraffes	86	4%
Canines	dogs	317	14%
Ungulates	asses	108	5%

	ibex	505	22.5%
	antelope	327	14.5%
	cattle	290	13%
Birds	ostriches	449	20%

Table 4.1. Types & numbers of animal petroglyphs

4.2 RIVERINE ANIMALS

4.2.1 Hippopotamus (*Hippopotamus amphibious*)

4.2.1.1 The Species

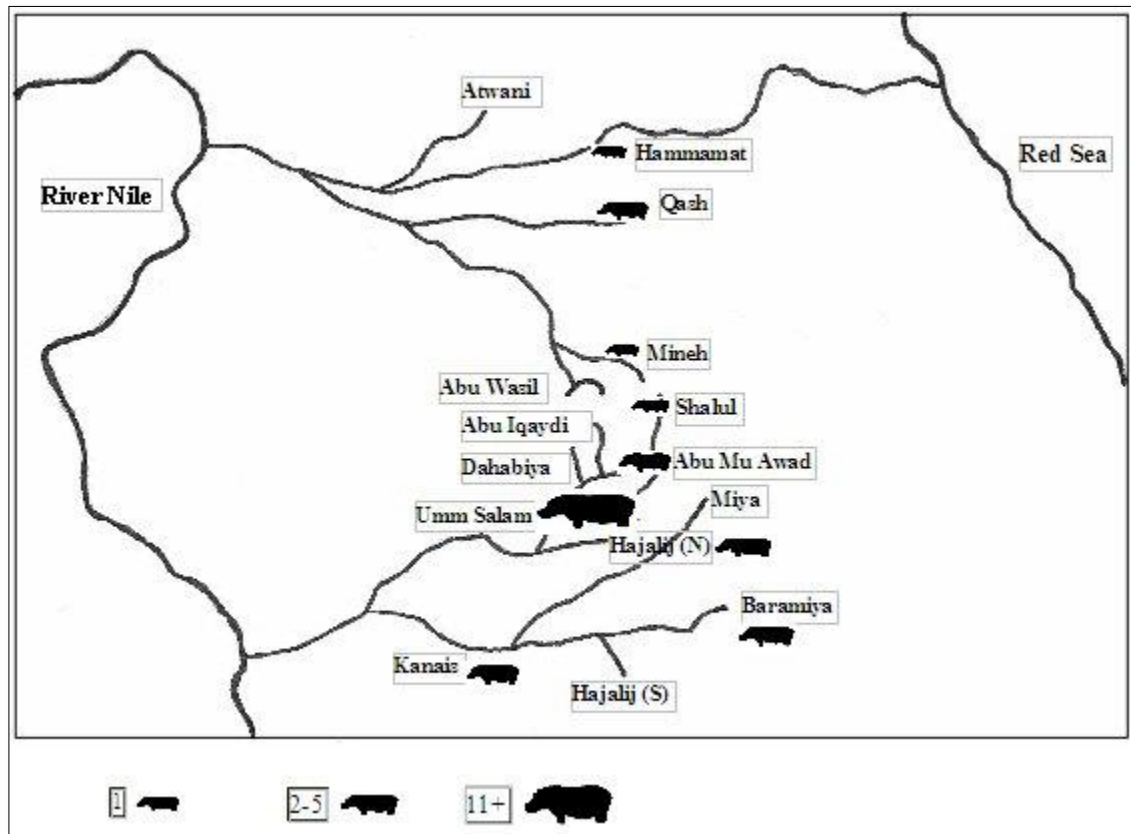
The Hippopotamus is a dangerous animal which lives in herds with a dominant male. Males fight in order to mate with the females and display, including by opening their mouths wide to show their large teeth. They also need to eat up to 130 lbs. of vegetable matter a day (Dorst & Dandelot, 1970: 172). The hippopotamus is a bulky, mainly aquatic, animal which spends long periods in rivers and other significant bodies of water rather than pools formed by occasional rainfall. It is a powerful swimmer or walker on the river bottom. It also requires mud as an important part of its habitat. Even in the pre-3500 BCE moister climate it is arguably impossible that such conditions existed in the Eastern Desert. Nile floods would have needed to be overwhelming for the wadis to have been flooded and the gradient increases west-east towards the Red Sea hills, militating against a suitable habitat being available.

Although Hippopotami are only found south of the Sahara today, they were present in Egypt until the early 1800's despite the pressure of hunting for both meat and ivory from their tusks (Osborn, 1998: 144). The distinctive bulky body and head shape of the animal makes it easy to identify in the rock-art. Three hippopotamus burials have been found in the predynastic elite cemetery HK6 at Hierakonpolis (Friedman, 2009b; Linseele, 2009: 113). In addition, ivory carvings, including pins, combs and labels are known throughout the Predynastic (Wengrow, 2009) but there is often no differentiation in archaeological reports between hippopotamus and elephant ivory.

4.2.1.2 Distribution

Hippopotami are the rarest of the individually noted fauna among the Eastern Desert petroglyphs with only 30 representations at 25 sites. These are overwhelmingly a

feature of the southern wadis, since nearly 80% of the sites with hippopotamus images are in the South. Indeed, 43% are in the Wadi Umm Salam alone, with only a solitary image in the core central Wadi Shalul. They are totally absent from central Wadis Dahabiya and Abu Iqaydi and sparsely distributed in the northern area outside of the single cave site of QAS-3, with no examples at all in the northernmost Wadi Atwani (Map 4.1).



Map 4.1. Distribution of hippopotamus images in the Central Eastern Desert

4.2.1.3 Dating

Stylistic comparison to Nile Valley images is indispensable when attempting to date the petroglyphs. However, even where an apparent example for comparison is identified, we should exercise caution. For example, at MIN-13 (RME 25A) there is a striking example much featured in Egyptological literature. A hippopotamus has a line representing a lasso or harpoon from its snout leading to a rope coil. The usual means of hunting hippopotami was to first pierce the animal's snout so that it could not submerge, pierce its body and haul the animal in. This example resembles the design on a Mahasna Naqada I painted vessel (Figure 4.1). However, this much published

and discussed image is unique among the petroglyphs. Therefore it cannot act as a guide to dating hippopotami images as a whole. Moreover, the animal in the rock-art is speckled, whereas the C-Ware example has the characteristic wavy pattern (Graff, 2009). This latter pattern is not seen in any other hippopotamus image as illustrated examples in the rock-art are almost evenly divided between those in-filled or in outline. The ‘harpoon line’ is also not exactly similar and is not connected to the same part of the animal’s body.

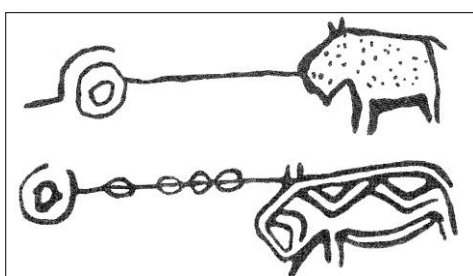


Figure 4.1. Comparison of petroglyph and pottery hippopotamus images, Above: MIN-13 petroglyph, Below: C-Ware hippo example, Rohl, 2000: 16

Hippopotamus images may, in fact, have an early or late date. This is evident from BAR-1 where a realistically styled image of a hippopotamus beside the a dynastic sphinx and Horus Falcon shows that the image was added to the rock-art in much later times than predynastic boats found at this site (Morrow & Morrow, 2002: 154). With the exception of this image, another with the same patination of Blemmye marks, and a clearly pharaonic example in Wadi Hammamat, all other illustrated examples can be dated to the Predynastic by association to other images from this era. There is an additional clearly predynastic hunting scene from Wadi Midriq in the Kom Ombo drainage basin (Figure 4.2), where hippopotamus images are even rarer than north of Baramiya (Judd, 2009 assoc. data sheet 5.3).

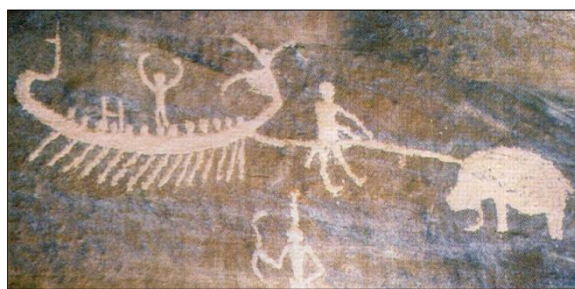


Figure 4.2. Hippopotamus hunt from predynastic ‘frond’ boat in Wadi Midriq, photo courtesy AWT

4.2.1.4 Discussion

The petroglyph creators showed no interest in the animal's natural behaviour in the Nile Valley. For example, there are no representations of hippopotami in groups or engaged in fighting. Instead, hippos are shown as singletons, often in association with the hunting of desert animals. Therefore, it is the hunting of this powerful creature on the Nile which seems to have been the motivation for portraying it in the rock-art, and thus the hunting of hippopotami is a significant feature in the rock-art. At QAS-3 (Figure 4.3 RME-18) three hippopotami are portrayed, two of which have two 'tethers' attached-one at the front and one at the rear. Five human figures hold these lines. At MUA-11 a hippopotamus again has two 'tethers,' suggesting hunting is shown here, although this time no-one is holding them (RATS 109). BAR-1 (Figure 4.4) has a hippopotamus with a 'tether' to its rear and HAJ-3 contains a hippopotamus with a short line leading from its snout. (RATS 36), while SAL-4 has hippopotami with speckled bodies (Figure 4.5) as at MIN-13 but without the 'tether.'



Figure 4.3. 'Tethered' hippos from QAS-3, after Winkler (1938), Morrow & Morrow, 2002: 226



Figure 4.4. Hippopotamus added to earlier images, BAR-2 Morrow & Morrow, 2002: 154



Figure 4.5. Hippopotami, SAL 4, Morrow & Morrow, 2002: 47

Further hippopotamus hunting can be seen at SAL-5 where single figures standing in two boats have what may be a hippopotamus on a lead Morrow & Morrow, 2002: 49), while at SAL-37 a single figure has a unique two wavy lines attached to a hippo's head. 'Tethering' or 'harpooning' is an important feature of the way in which the hippopotamus is depicted, especially in predynastic petroglyph contexts. Even where hippopotamus hunting is shown, it is often portrayed in context with other wild animals. This suggests that it is the hunting which is as, or more important, than mere portrayal of the animal, since there are no depictions of hippopotamus fights or of them opening wide their enormous jaws-even though these are dramatic features. It is also notable that hippopotamus depictions are overwhelmingly a feature of the southern wadis. Significantly, the importance of hunting hippopotami is not mirrored in the Nile Valley where the animal actually lived, in that there are no rock-art hunting scenes and the images are not associated with human figures (Judd, 2009: 42).

4.2.2 Crocodiles (*Crocodylus niloticus*)

4.2.2.1 The Species

Crocodiles are dangerous reptiles and lie in shallow water or on land near the riverbank waiting for prey. They are powerful animals and could seize any creature except hippopotamus or elephant which came to the river to drink or cross.

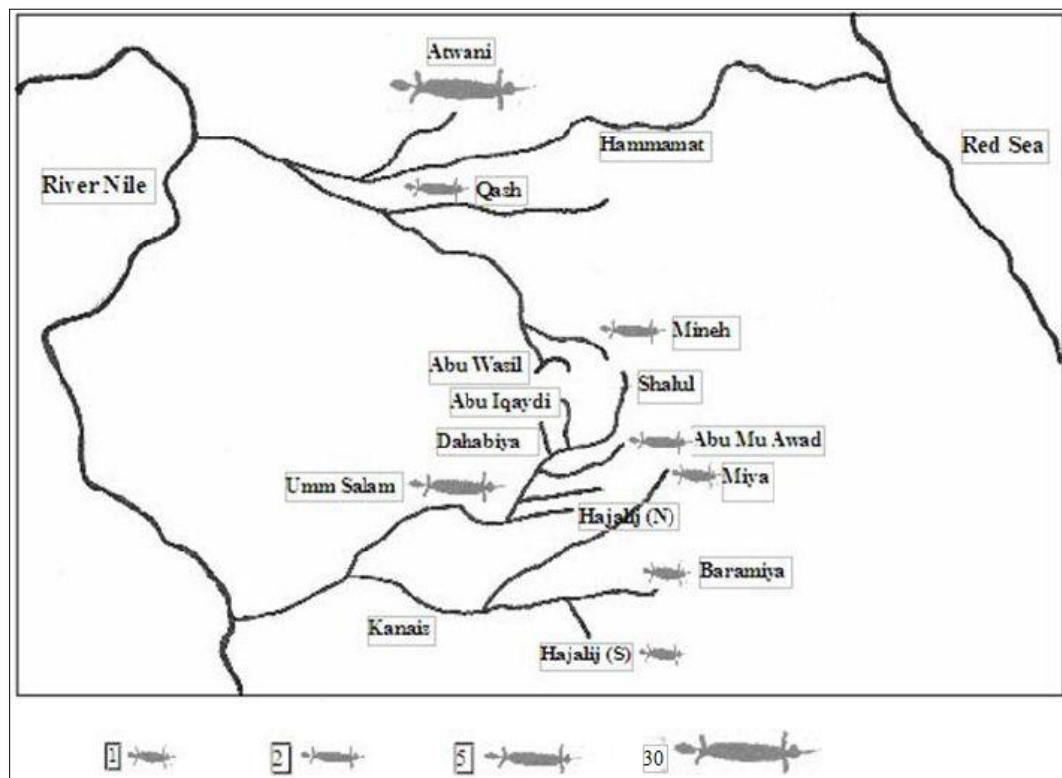
Crocodiles, alligators and caymans inhabit a river or swampy environment, being social animals living together in groups. They are carnivores and ‘clean up’ carcasses of dead animals, even those which have died through disease as they have a powerful immune system (Merchant, 2009). They also have a distinctive twirling motion when tearing meat off while feeding in the water (Hutton, 1984). Crocodiles are no longer found in Egypt north of Lake Nasser due to the density of modern human habitation (Univ. of Berkeley, 2011).

4.2.2.2 Distribution

As noted in Chapter Two, the EDS and RATS teams found it difficult to positively identify a number of the images and only tentatively described them as crocodiles. In an overwhelming majority, twenty examples, in other words the overwhelming majority, the identification of these images as crocodiles comes with an alternative identification of lizard/salamander or a question mark and this affects an outline of the animal’s distribution. Indeed, at SAL-41 a choice of three alternatives: crocodile, lizard or scorpion is given (Morrow & Morrow, 2002: 91). If we exclude this doubtful identification and SAL-20 (Morrow & Morrow, 2002: 68) where there is also doubt, crocodile images are limited in Umm Salam to the early and firmly identifiable crocodile sites of SAL-1 and 15. If the ‘crocodile’ images in Wadi Atwani are actually lizards or salamanders, then this removes 50% of all the examples in the survey area and changes the distribution completely to be overwhelmingly focussed in the southern wadis. Finally, the absence of crocodile images in the core central wadis is notable.

With 47 images at 17 sites the frequency of crocodile motifs is less in terms of sites but more than the number of hippopotami, and constitutes a rare animal in the Central Eastern Desert rock-art. The majority of sites with crocodiles are in the southern wadis, but a large majority (32) of individual motifs in the northern ones, which is

very unusual concerning distribution in the Central Eastern Desert (Map 4.2). This marks a considerable over-representation in the north, given that number of sites in this area makes up only 14% of the total. There are only two sites represented in the central sector, both in the northern part. Yet, this seeming majority in the north may not be accurate.



Map 4.2. Distribution of crocodile images

4.2.2.3 Dating

Most of the crocodile images in the southern wadis can be given a predynastic date by association. However, the northern Wadi Atwani examples are extremely problematic, as demonstrated by Figure 4.9 (below). In particular, those at ATW-10 (RME-14) are at a ‘High’ level, an unusual feature in itself, and above clearly predynastic material. They also bear little relation to depictions of crocodiles elsewhere in the survey area. The rock column by which the cliff face could be accessed has crumbled away and may have done so before the low-level predynastic petroglyphs at this site were created.

The dating of some crocodiles is easier in the south where they can more easily be identified. A crocodile can be clearly identified at BAR-9 (Figure 6) where a double-plumed figure has control of a crocodile with a lasso/harpoon. This is part of a scene which shows human figures lassoing or otherwise having control of various animals in addition to images of boats. In this case, not only does the ‘crocodile’ bear a good likeness to the animal, but one does not usually lasso a small lizard or salamander. It is part of a panel that is clearly predynastic in date. Moreover, all depictions of crocodiles on media in the Nile Valley before Naqada III are seen from above (Darnell, 2002: 79). From examination of media up to the establishment of the First Dynasty it is evident that they are always portrayed as viewed from the side. The unfinished in-profile example at IQA-4 (RATS: 138) is therefore a late and rare example.



Figure 4.6. Crocodile harpooned by plumed figure at BAR-9, author’s photo (digitally enhanced)

4.2.2.4 Discussion

In exploring the reasons for depicting Nile crocodiles in the semi-desert, we can observe the recording of a noteworthy event which occurred in the Nile Valley in a few cases. SAL-12 has a dog or lion gripping a crocodile by the snout. This is a most unlikely occurrence in real life, unless it is a representation of an amazing event witnessed by the petroglyph creator (Figure 4.7). A more likely event to have actually occurred is the seizing of a person by a crocodile depicted at DAH-2. Although crocodiles would have been a danger to Nile Valley dwellers, this is the only such depiction in the rock-art (Figure 4.8). It is also unusual in that it is one of only two examples shown in side-view. All the rest in the Central Eastern Desert are seen from above. It is also unclear if the Wadi Atwani examples are those of crocodiles (see Chapter Two, 2.1.1). Some of ATW-6 (RME-17) motifs have splayed toes, (Figure 4.9), while all those at ATW-10 (RME-14, Figure 4.10) do not. In addition, the Atwani sites have multiple images, whereas in all other wadis they usually stand

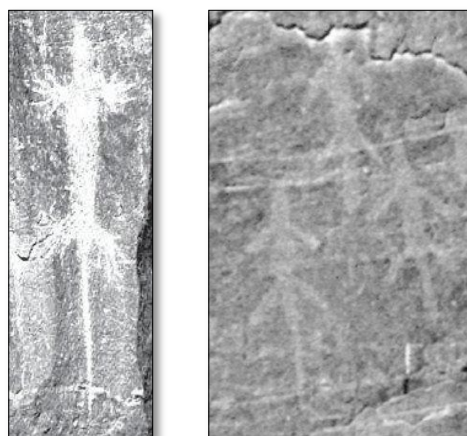
alone. Both are ‘High’ sites in the boulder strewn part of the wadi, far from its entrance. They contrast with all the other sites where there are clear or disputed crocodile images which are at a ‘Low’ level. Crocodiles are a minor part of the Eastern Desert rock-art. There are no depictions of them naturally in groups outside of the contested images in Wadi Atwani. If the Atwani examples are accepted as crocodiles, there is an overwhelming presence in the north, as opposed to the distribution of other animals. The combination of ‘crocodiles,’ hand-prints and ‘nets’ is unique to Wadi Atwani, and no clear parallels are available in the survey area.



Figure 4.7. Lion attacking crocodile, SAL-12 Morrow & Morrow, 2002: 59



Figure 4.8. Crocodile with figure in jaws, DAH-2, Morrow & Morrow, 2002: 150



Left: Figure 4.9. ‘Crocodile,’ ATW-6 Morrow & Morrow, 2002: 197 Right: Figure 4.10. ‘Crocodiles,’ ATW-10 Rohl, 2000: 146

Although crocodiles of Nilotic type have been found in modern times far to the west of the Nile with access only to seasonal pools, it seems likely that these few images relate to what Ancient Egyptians saw in the Nile, not a hibernating species in the wadis. Also, Judd (2009: 17) has already noted that hippopotami and crocodiles are not found together at many petroglyph sites. They would probably have been living at the same sites if there were sufficient pools of standing water in predynastic times. Three examples out of this small sample of crocodiles, two lassoed crocodiles and that held by the 'dog'/'lion,' are of a piece with other hunting and 'control' scenes in the southern wadis. There is also an example from Wadi Midriq (Shepherd, 2004: 7) where four figures related to those at BAR-10 (see Figure 7.32, Chapter Seven), two holding 'tethers,' hunt a crocodile seen from above. This marks the scene as also a predynastic example. These hunting scenes are in contrast to examples from the Nile Valley which appear to be unrelated to nearby animals and human images (Judd, 2009: 42).

4.3 LARGE ANIMALS

4.3.1 Elephants (*Luxodonta africana*)

4.3.1.1 The Species

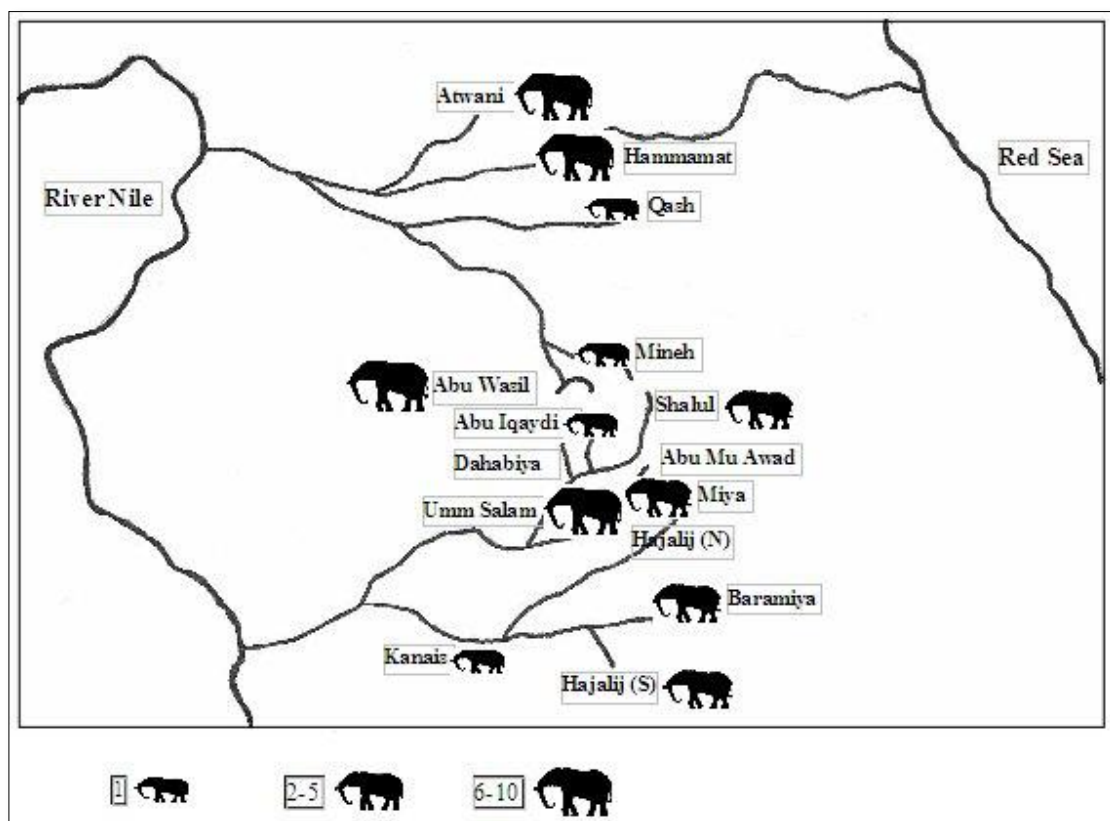
Despite its size, the African elephant is remarkably adaptable, since it lives in the forest, on the savannah and in the Namib Desert. It requires drinking water every few days, but not necessarily a river or lake. It can range over an extremely wide area. Therefore, unlike the hippopotamus, it is feasible that depictions in the rock-art show examples of animals living in what is now the Eastern Desert. In accounting for their distribution it must be noted that female and young elephants are social animals and live in herds led by an experienced matriarch. Senior bull elephants sometimes join the herd, but often spend time alone (Dorst, 1970: 158).

Elephants lived throughout Egypt during the Neolithic era (Osborn, 1980) but survived south of Qena until probably the middle of the Old Kingdom (ca. 2,600 BCE, Butzer, 1959). No elephants are found in Egypt today and none live north of latitude 13° N., with only isolated pockets north of the southern tropic (Haltenorth &

Diller, 1980). Two elephant burials have been discovered in the predynastic elite cemetery HK6 at Hierakonpolis (Friedman, 2009b: 1).

4.3.1.2 Distribution

Distribution of elephant images is more even than for hippopotami, with 42 representations at 10 northern, 6 (north)-central and 11 southern sites (Map 4.3). In comparison with the distribution of other motifs, the number of images is untypical in that there are also a considerable number in the northern wadis Hammamat and Atwani; usually the area with the smallest number and average percentage distribution of animal motifs. Indeed, all three areas have good numbers of elephant petroglyphs, in contrast to the usual bias of images occurring more frequently in the southern wadis. However, there are no elephant petroglyphs in the central Wadis Abu Iqaydi and Shalul. Given this wide distribution, the ability of elephants to range widely, and archaeological remains from the Predynastic, it is possible that many of the images represent animals seen in the survey area.



Map 4.3. Distribution of elephant images in the Central Eastern Desert

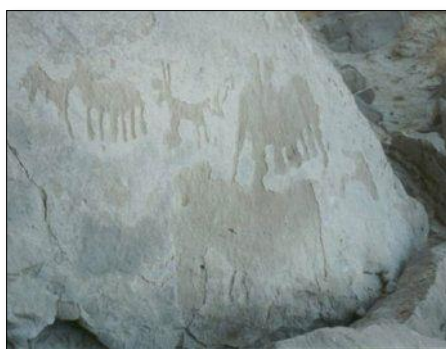
4.3.1.3 Dating

There are not sufficient distinctive features among the elephant images to construct an accurate typology. Nor is there an indication that any general style of elephant image can be dated to a particular historic period, and therefore individual images must be assigned by association with other dateable examples. The depictions of elephants at ATW-4 and 6 (Figures 4.11 and 4.12) are similar in style and may well be by the same rock-art creator (Morrow & Morrow, 2002: 196 & 197).

Unfortunately, neither of these sites has any other dateable motifs, and this illustrates the difficulty of dating elephants which are not integrated into a tableau. The large elephant depictions, which seem to show a herd, at ATW-8 (Figure 4.13, RME-13, Rohl, 2000: 143) resemble these, while the one at ATW-12 (Figure 4.14, RME-15) is in a completely different style. Indeed, it has more in common with the example at KAN-1 (Figure 4.15) The latter motif does have the wavy line (unique in elephant petroglyphs) reminiscent of animal depictions on Naqada I C-Ware (Graff, 2009).



Left: Figure 4.11. Elephant, ATW-4, Morrow & Morrow, 2002 196, Right: Figure 4.12. Elephants, ATW-6, Morrow & Morrow, 2002, 197



Left: Figure 4.13. Elephant herd, ATW-8 author's photo, Right: Figure 4.14. Elephant, ATW-12, Rohl, 2000: 148



Figure 4.15. Elephant at KAN-1, author's photo

Images of elephants are found both singly and in groups. In the Wadi Hammamat, HAM-2 has a group of animals, whereas 3, 7 and 8 have single examples. The RATS teams at ATW-1 (RME-12) could not relocate a scene of three elephants surrounded by three hunting figures recorded by Winkler (Winkler 1938: 27). Winkler found another site showing hunting, this time of a single-feathered figure with a bow and an elephant in Wadi Mineh, re-recorded by the EDS survey, (Winkler, 1937: fig. 14) while at ATW-12 (RME-15) an elephant is attacked by two bowmen (photo M105a; EES archive-not recorded in the EDS publication. These are the only three examples of elephant hunting in the survey area. QAS-3 (RME-18) has a great variety of animals depicted, including elephants in a predynastic context, and there are single animals depicted in the Wadi Mineh, plus a 'probable elephant' at WAS-3 (Morrow & Morrow, 2002: 175) with two at WAS-2. WAS-10 (RME-26) has a single example on a flat rock in front of the main surface (Figure 4.16). The elephant is at the bottom of the scene, but has the same patination as the bovid (some tethered/haltered) and feathered figures, which suggests that it is contemporaneous. Wadi Miya's MIY-1 not only has two separate individual images, but also a group of six elephants among other animals, a boat, and an 'arms raised' figure (Figure 4.17). These indicate a predynastic date. These elephants are also notably slim and are led by a larger example. Perhaps a family group is depicted here.

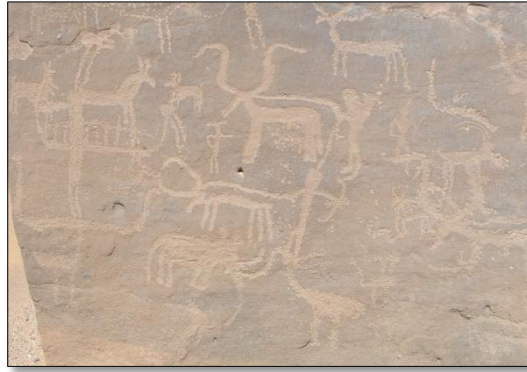


Figure 4.16. Elephant & other animals at WAS-10, author's photo



Figure 4.17. Elephants among boats & other animals, MIY-1 Morrow & Morrow, 2002: 162

A dynastic or later date is suggested for examples at SHA-4 and 6 by the presence of hieroglyphs at the former and of horses and camels of a similar patination at the latter. A unique example of a tethered elephant is present at SAL-3, but is of a lighter patination than the boats and other images at this site; again suggesting a later date. Sources other than the rock-art suggest the use of elephants at this time. War elephants were common in Ptolemaic times when Kom Ombo was a training centre and reference is made in Greek at Kanais to an elephant hunt (Weigall, 1909: 166). Ptolemy II Philadelphus in particular launched large expeditions to capture African forest elephants, developing the port of Berenike on the south-east Egyptian coast and using Coptos opposite Wadi Hammamat as a collection and perhaps training centre (Casson, 1993). Therefore, it is not necessarily the case that elephants must be early in date due to aridification making their presence in the survey area unlikely after the Predynastic. Overall, therefore, elephant images have a considerable range of dates.

4.3.1.4 Discussion

Most elephant depictions are not very realistic in that it is common to show the ears sticking up above the head. It may be that the sight of elephants flapping their great ears was of particular note to the petroglyph creators. Of the twenty sites at which there are illustrations, tusks are shown at half but not indicated also at half. This omission suggests that many of the animals are young. Virtually all the petroglyph creators were careful to show the stubby feet. They also noted examples throughout the Central Eastern Desert, but mostly singletons or small groups. This is not surprising, as the scarcity of water even before the particular drying phase around 3500 BCE would have enabled only a few animal groups to survive. Elephants are strongly social animals, so we would have expected to see depictions of large groups if they had been there. The Atwani sites are mostly in the boulder field and would have been inaccessible to a large mammal. Thus, it is unlikely animals were spotted in the immediate vicinity, yet eleven (25%) elephant depictions are in this wadi and they are found deep inside the wadi, not just near the junction with wadi Hammamat. It is also surprising that two out of three examples of an elephant hunt (all three with bows) are in this wadi.

Apart from singleton adult males, elephants are social animals. Overwhelmingly examples in the Wadis Miya, Baramiya and Abu Mu Awad are singletons alone or among other animals. All of the images in these wadis have tusks and there is little differentiation in size even where groups are shown. Only three sites have groups of elephant motifs. As at MIY-1 (see Figure 4.17) elephants are often associated with scenes of other animals and people, whereas in the Nile Valley few are associated with people and boats (Judd, 2009: 41). So the petroglyphs appear to show a real life situation with its mix of single male animal motifs and groups. The small number of animal groupings suggests that most elephant depictions are singleton males.

There are no depictions of elephant trains or of people riding elephants, or of any accoutrement such as a cloth or saddle on an elephant's back. This would seem to rule out their interpretation generally as war beasts from the Greco-Roman period. If these are depictions of animals living in the survey area, then their number would have been low even when the climate was moister. Apart from the tethered elephant and one late

example dated as Ptolemaic by an inscription at Kanais (Weighall, 1909: 167), illustrated images which can be dated by association can be assigned to the predynastic period.

4.3.2 Giraffes (*Giraffa camelopardalis*)

4.3.2.1 The Species

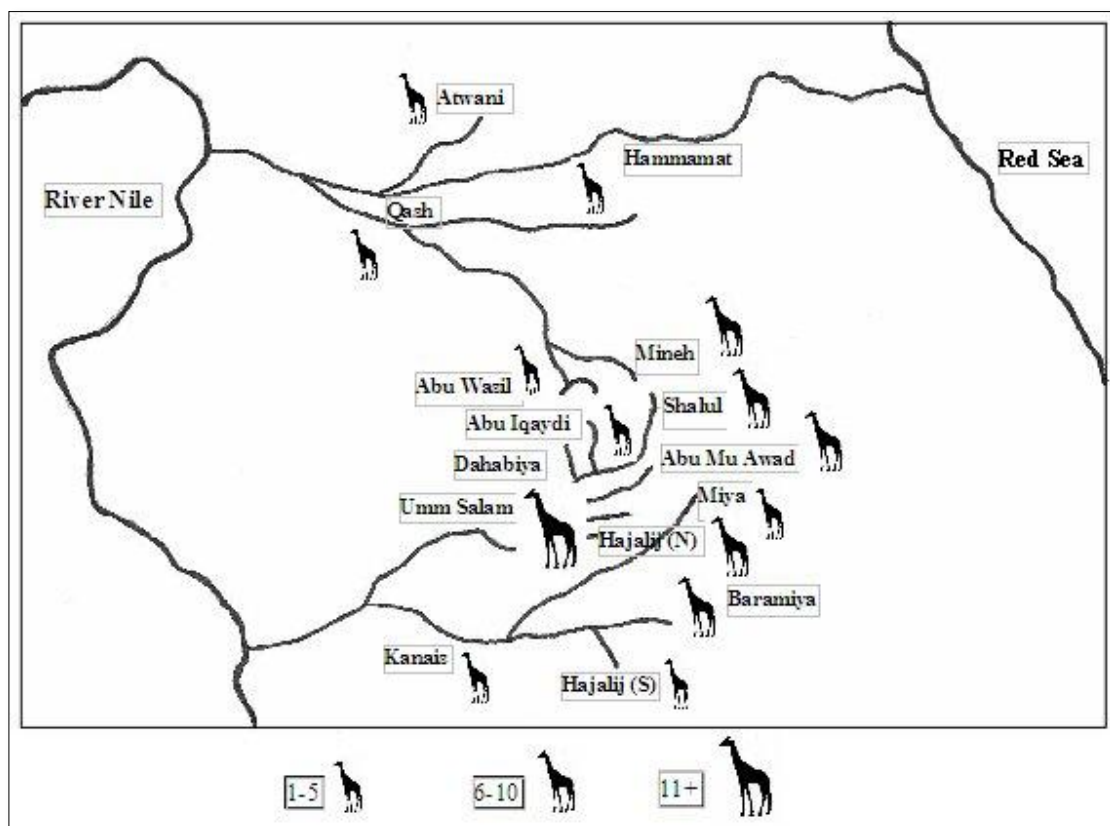
The giraffe is a tall and therefore extremely noticeable animal. All sub-species have a distinctive body pattern of irregular shapes separated by a network of light buff coloured lines. It has a long tufted tail which can reach almost to the ground. With their long necks they prefer to eat from trees such as the acacia rather than graze at ground level. They have tough tongues which can readily cope with thorny desert scrub and only need to drink occasionally if water is scarce. With their long legs giraffe can run extremely fast to escape animal or human hunters on the flat. Males fight for the ability to mate with available females using the small horns on the top of their head. Giraffe live in small herds with up to eight males, females and young (Dorst, 1970: 183).

Giraffe remains have been found in the Gilf Kebir (Osborn, 1998) and are prolific among the petroglyphs there (Zboray, 2009). There are representations on C-Ware Naqada I pottery (Graff, 2009) and a few tribute animals from Nubia on tomb walls in the New Kingdom (Osborn, 1998: 150). There are no giraffe in the modern desiccated Central Eastern Desert. They currently inhabit the savannah south of the Sahara (Dorst, 1970: 183). The giraffe today inhabits areas where two hundred millimetres of rain a year marks its northern boundary. Human activity in hunting and altering the habitat may have affected the giraffe's distribution and density, so prehistoric and modern habitats may not be exactly comparable. Even in the Holocene pluvial it is unlikely that there was regular rainfall of two hundred millimetres (Kuper, 1993: 167). However, the giraffe is well adapted to a semi-desert environment. It can go for several days without drinking and its digestive system and teeth are well suited to browsing thorny trees. Its long legs make it poorly adapted to browsing on grassland. But it can range from two to three hundred miles in each direction. Thus the giraffe can exploit seasonally available vegetation with its ability to roam considerable distances. As long as the giraffe had access to higher rainfall, heavier vegetation core

areas, its presence in the Predynastic in what are now the Western and Eastern Deserts and among the petroglyphs is unsurprising.

4.3.2.2 Distribution

The 86 giraffe images are absent from the Wadi Dahabiya and present at only one site in the Wadis Abu Wasil, Hammamat and Atwani. Thus, they are rare in the north. Except for a significant presence in the Wadis Qash and Mineh, giraffe petroglyphs are most prominent in the southern wadis since 33, or 72% of the giraffe sites, and 73% (63) of the images, are located there (Map 4.4). Moreover, the Wadi Umm Salam frequency dominates, containing 40% of all the giraffe petroglyphs, while contributing 18% of the total number of sites (46) in the Central Eastern Desert. With the inclusion of the 17% of images in Wadi Baramiya, 57% of images are in only these two wadis. Overall, in evidence at 46 (19%) of sites, the incidence of giraffes stands between that of the large and riverine mammals on one hand, and ibex and ostriches on the other.



Map 4.4. Distribution of giraffe images

4.3.2.3 Dating

Not all the images described as giraffes are illustrated as thirty examples, a significant proportion, are noted but unfortunately there is no depiction in the EDS and RATS survey publications. This has been a significant obstacle to dating the giraffe component of the corpus. In addition, Winkler chalked many of the petroglyphs he discovered in order to aid photography. He did this at MIN-13 (RME-25A, Rohl, 2000: 76) with two giraffe images, one large with a raised tufted tail and one small animal. By doing this he destroyed evidence of patination and enhanced the hatched and spotted pattern of the animals' coats (see Figure 4.18).

Judd (2006) has compiled a seven part classification of giraffe petroglyphs in the Central Eastern Desert, and also from the unpublished the Kom Ombo drainage basin material. Illustrated Central Eastern Desert giraffes occur in categories One, Two, Four and Seven in almost equal numbers. Categories One and Two are well-drawn images which can usually be assigned a pharaonic/late date-as at MIN-22, while those in Three and Four are found at predynastic sites. This supports the contention that a significant proportion of the giraffe images, perhaps a quarter or more, are late in date and were probably representations of captive animals acquired by trade or tribute and seen in the Nile Valley rather than encountered in the survey area.

Giraffe can most often be dated by association rather by the pattern of their hide. Only 8 of the giraffe images have patterned hides (Figure 4.18) as opposed to the bodies being pecked out, which is the usual manner of depiction of animal images in the survey area. These examples, and ones which are not pecked out, are spread throughout the survey area. MIN-1 (Morrow & Morrow, 2002: 187) has a single example with splayed legs in a pose which suggests (uniquely) running next to a camel to the left of the main site with boats, which indicates a late date. Min-14 (Figure 4.19, RME-24B) has a large, rare incised example with no coat detail. It is part of a mixture of images from the Predynastic to the New Kingdom and difficult to date, but since it is incised and clear a later date is to be preferred. Two cross-hatched giraffes at MIN-28 (Figure 4.20, RME-24H) have the same patination as Greek lettering and may be assigned to the Greco-Roman period.



Left: Figure 4.18. Adult & young (?) at MIN-13, author's photo, Right: Figure 4.19. Incised giraffe at MIN-14, author's photo

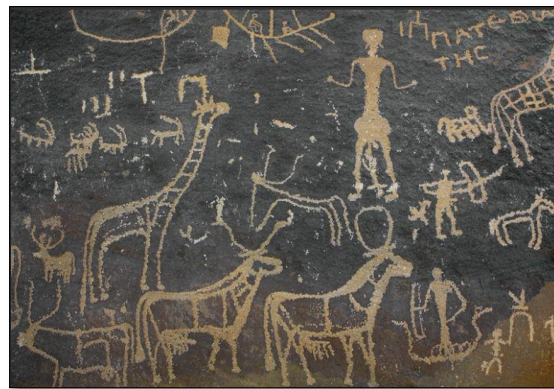


Figure 4.20. Late examples at MIN-22, author's photo

Further evidence that giraffes can be of a late date is shown at SHA-4 where another animal in outline is grouped with an elephant and felines (?) in a unique style (Figure 4.21). Incising a petroglyph is not common in the rock-art of the survey area, and where this occurs the image usually has a late date. Again, comparative patination data is not available. There is a range of images including square boats, but also hieroglyphs and camels. Thus the unique nature of these images and the context of the associated images would suggest a non-predynastic date. In addition, at IQA-4 camels and Blemmye signs are carved over darker patinated giraffes, antelopes and asses (Morrow & Morrow, 2002: 138). In the Wadi Abu Mu Awad MUA-6 (Morrow & Morrow, 2002: 103) has a single giraffe in outline with a short tail, completely different in style to a herd of giraffes at MUA-17 (Figure 4.22) where the tails reach

right down to the ground. These animals are mixed together with antelopes. They are being pursued by dogs and single-plumed hunters carrying bows. This hunting context suggests an early date, and is the only example of human figures in close proximity to a giraffe. At MUA-22 (Figure 4.23) a “possible giraffe” is overlaid by dynastic boats but no patination is recorded, and boat and ‘arms raised’ figures are not present. Thus in the central wadis few of the giraffe petroglyphs can be assigned a predynastic date with confidence. Hunting and a drying climate is likely to have made giraffes rarer in the Central Eastern Desert over time.

Where a giraffe stands in a boat it might be possible to date the animal by means of the vessel. However, this is problematic. At HAJN-2 (Figure 4.24) an animal identified as a giraffe stands in a square boat, although its chunky body and lack of a tail makes its labelling as a giraffe problematic (despite the elongated neck). At HAJN-1 (Figure 4.25) a flared boat is superimposed over a giraffe making it look as if the animal is on deck. There are only twenty cases in the Central Eastern Desert where it can definitely be stated that an animal stands in a boat compared to over two hundred human figures which do so. Moreover, they tend not to be in easily dateable types or in clear associations. This makes dating of these examples difficult and there are no examples where giraffe can be dated by this means.



Figure 4.21. Giraffes & unique felines in outline at SHA-4, Morrow & Morrow, 2002: 126



Figure 4.22. Herd at MUA-6 Morrow & Morrow, 2002: 102

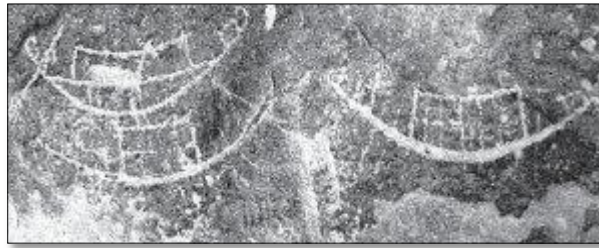


Figure 4.23. Giraffe overlaid by dynastic boats, Morrow & Morrow, 2002: 120



Figure 4.24. Disputed 'giraffe' at HAJN-2, Morrow & Morrow, 2002: 33

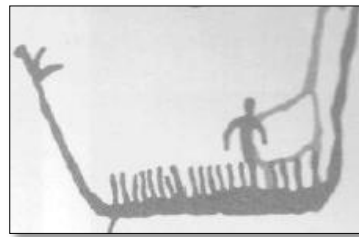
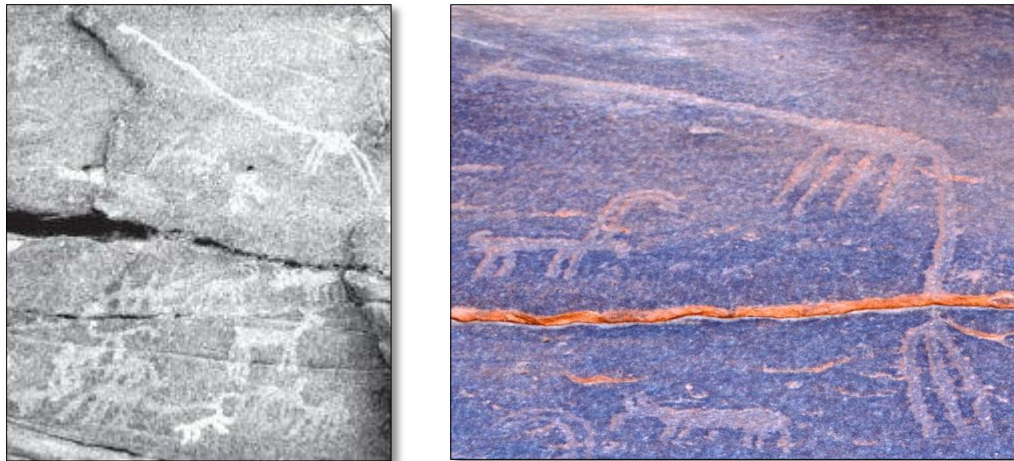


Figure 4.25. Giraffe apparently in boat, HAJN-1, Rohl, 2000: 32

There are some sites which appear to have attracted giraffe petroglyph creators in particular. For example, Wadi Umm Salam contains sixteen (35%) of all the petroglyphs sites with giraffe images, covering a range of styles. There are two examples of hatched giraffes standing within boats, one sickle and one square at SAL-7 (Figure 4.26) and SAL-29 (Figure 4.27). The latter has a tufted tail with six strands of hair at the end and stands above the boat, while a smaller giraffe stands on deck. Uniquely, the larger animal appears to have what may be a tether running from its mouth-the only example in the survey area. SAL-7 has more examples of giraffes, of a different style, where the neck is elongated and the body pecked out (Figure 4.28).



Giraffes within the confines of a boat, Left: Figure 4.26. SAL-7, author's photo, Right: Figure 4.27. SAL-29, Morrow & Morrow, 2002: 79, both with hatched pattern hides



Left: Figure 4.28. Giraffe with in-filled body and short tail, SAL-7, Rohl, 2000: 51, Right: Figure 4.29. Giraffe with tufted & exaggerated tail, SAL-7, author's photo

Related images can be found at a number of geographically close sites. Some of the giraffes at SAL-2, SAL-10, SAL-7 (Figure 4.28 above) and SAL-14 (Figure 4.30) are similar in that they have long, exaggeratedly tufted tails with three or four strands. These can be given an early date by association. The images at SAL-14 are part of a tableau which contains depictions of about ninety animals. But there are also older, more darkly patinated giraffe motifs present. SAL-7 actually has three different styles of giraffe representation, suggesting images added to a perceived 'giraffe site' in the mind of the successive creators. Unfortunately the SAL-14 examples cannot be specifically dated. Given the mix of animals and the presence of dogs-often indicative of predynastic activity, an early date could be assigned to these giraffes, especially those with elongated tufted tails seen at other sites. All the giraffes with exaggerated tufted tails are in early contexts, either being in association with hunting dogs, or in the case of Figure 4.27, standing in a square boat with the double rear streamer indicative of a predynastic date.

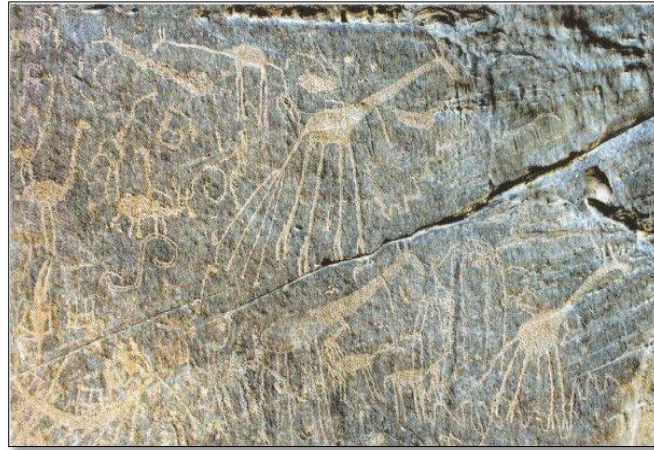


Figure 4.30. Tufted tailed giraffes over older examples at SAL-14, author's photo

The considerable proportion of giraffes not illustrated in the EDS/RATS publications hampers dating. However, in summary, it seems that northern examples tend to be late and southern ones early. Since giraffe have a long range and feed on acacia they could have inhabited the semi-desert it is possible that these southern petroglyphs represent animals in the area.

4.3.2.4 Discussion

Only singletons or small groups of giraffe are usually depicted, apart from the untypical site SAL-14, suggesting that even in the moister period before 3,500 BCE, only low numbers could survive in the semi-desert. This contrasts with the 530 in Nubia, eight times more than in the Central Eastern Desert (Judd, 2009: 114). There is no scene in which human beings are shown in proximity to giraffe, although dogs can be shown in pursuit. This mirrors life in the wild as giraffe are usually fast enough to outdistance a running hunter with ease, unless stalked successfully. But it also shows that the petroglyph creators did not believe it necessary to incorporate this animal into the 'Integrated' scenes. The lack of giraffes in the major hunting/boat scenes suggests that the animal was noted for its size and appearance, or that most depictions date from a different period to the integrated scenes. Finally, if the numbers of petroglyphs is a representation of actual distribution, then giraffes were either most commonly present in the southern area, or the people who travelled in this area had seen these animals the most.

4.4 UNGULATES

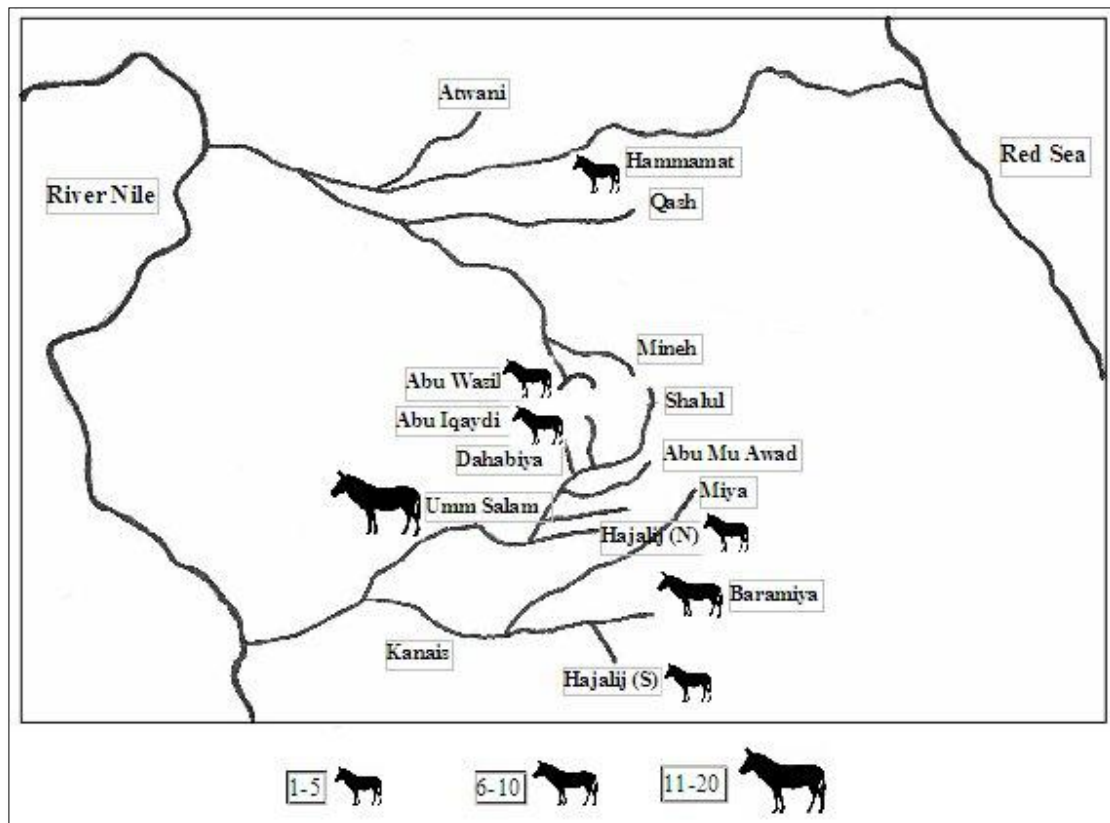
4.4.1 Asses (*Equus asinus africanus*)

4.4.1.1 The Species

The wild ass is the ancestor of the modern donkey and one of its distinguishing characteristics is that it possesses a flowing mane. It lives in small herds and can survive easily in semi-arid conditions as it only requires water every three days. It is also a very good climber in rocky locations, so it is suited to the Eastern Desert. Asses live in small herds of ten, sometimes up to thirty animals (Haltenorth, 1972). In Africa they retreat to mountainous areas during the day and graze in the late afternoon at night, or early morning (Dorst, 1970: 159). There are none in the Central Eastern Desert today, but they may be found in the extreme south-east of Egypt near the border with Sudan as well as south of it (Osborn, 1998). All the images appear to be wild asses since they are usually part of hunting scenes, and there are no depictions of donkey caravans or of animals carrying a load. Hierakonpolis predynastic elite cemeteries HK6 and HK29A contain ass burials (Friedman, 2009) and there are images on predynastic palettes.

4.4.1.2 Distribution

Asses are overwhelmingly a southern phenomenon, as 77% of the 40 sites and 76% of the 103 images are located there (Map 4.5). Once again, Wadi Umm Salam has the highest number of images at 36% of the total, and with Wadi Baramiya at 20% and Umm Hajalij (N) 13% these three wadis have 70% of all ass petroglyphs between them. This significant presence contrasts with the Nile Valley where there are no examples with manes at all (Judd, 2009: 43). Apart from Wadi Shalul in the central area with 10% of asses, no other wadi has a proportion of the images in double figures. The three wadis comprising the northern area only have 10% between them.



Map 4.5. Distribution of ass images

4.4.1.3 Dating

Asses are very often found in association with other animal images in hunting scenes at sites which can be dated to the Predynastic period, for example at BAR-9 and 10 (see Figures 4.31 & 4.32). This is especially true in Wadis Baramiya and Umm Salam, which between them have approaching 60% of the total of ass images.

Dateable sites where asses are present are in a ratio of two-to-one predynastic to late in Baramiya and five-to-one in Umm Salam. Therefore, it is likely that most wild ass images are early in date. This is reinforced by the observation that there are none and one example respectively in Wadi Miya and Abu Mu Awad, both of which overwhelmingly have late sites.

4.4.1.4 Discussion

Asses are often drawn in a hunting context, as shown at BAR-9 (Figure 4.31). The asses are situated below an incurved square boat in which stands an 'arms raised' figure and are part of a larger hunting scene which includes antelope, ibex, and other animals, some being lassoed. At BAR-10 (Figure 4.32) there is also a hunting scene in

which a mixed group of animals, including ibex, antelope and asses are being chased down by hunters and dogs. They appear to be part of a game drive. This is typical of the context within which asses are depicted in the survey area.



Left: Figure 4.31. Asses in ‘game drive’ at BAR-9, author’s photo, Right: Figure 4.32. Ass hunted by pack of dogs & hunters with bows, BAR-10, author’s photo

In the light of the association of asses (‘way-layers of the sun’) with giraffes ‘bearers of the sun’) at El Kab by Huyge (Friedman, 2002) it is necessary to examine any potential relation between the giraffe and ass motifs in the Central Eastern Desert. Although both ass and giraffe images are found at around forty sites each, at only five sites are both ass and giraffe images present: SAL-7, 10 and 14, HAJN-8 and IQA-4. At SAL-7 (Morrow & Morrow, 2002: 51) asses and giraffes are situated in the same scene with similar patination. This tableau contains many different animals, including ibex, ostriches and crocodile in addition to asses and giraffes. At SAL-10 (Morrow & Morrow, 2002: 55) the giraffe and ‘ass’ are associated but the identification of the latter is problematic, while at the large and complicated SAL-14 (Morrow & Morrow, 2002: 64) asses and giraffes are amongst the multiple depictions of various animals. At HAJN-8 (Morrow & Morrow, 2002: 41) the ass is on the main rock face, while the two giraffes are on the upper register, so are not in close association. In the Wadi Iqaydi IQA-4 (Morrow & Morrow, 2002: 138) has asses and giraffes closely associated, while at the other Iqaydi sites asses are grouped with other animals, as is the case in the other sites which have depictions of asses. In conclusion, the association of asses and giraffes is extremely rare and where the two do appear together they are part of wider animal groupings.

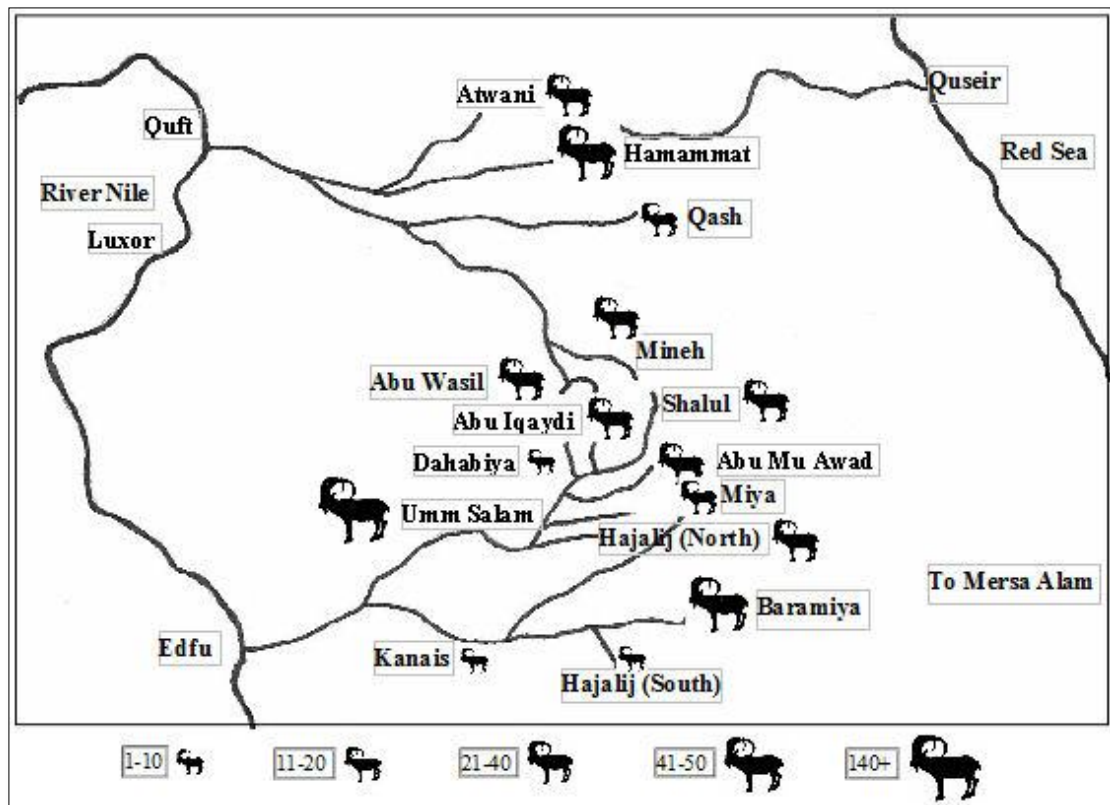
4.4.2 Ibex (*Capra ibex nubiana*)

4.4.2.1 The Species

The ibex is an excellent climber and thus well suited to the rocky conditions of the Central Eastern Desert. It lives either in small herds, while males may be solitary. Male ibex have long, heavily curved and diverging horns. Females' horns are shorter (Osborn, 1998: 180). Beards are present on males and older females, but these are conspicuously absent among the petroglyphs. They usually feed until the sun grows too warm and then shelter in a cave or under an overhang. Ibex are hardy and have been able to survive in Egypt over the millennia into the present day, being confined to "rocky mountains with a more or less desert character" (Dorst, 1970: 271). While in reality the ibex' horns only reach half-way along the length of its body, the vast majority of those portrayed in the rock-art are exaggerated in length.

4.4.2.2 Distribution

The ibex is the most common animal depicted in the Central Eastern Desert, 505 being found at 156 sites (63%). Only falling below 50% in the Wadis Abu Wasil and Atwani, and reaching at least 66% of sites in 10 wadis, the ibex is a dominant image (Map 4.6). While frequency in depiction is not necessarily an exact guide to numbers living at the time, the great number of images and wide distribution do suggest that this was a common animal and one which was important to the petroglyph makers. Indeed, it can still be seen today in the survey area. The southern wadis have the largest percentage of sites (55%) and images (60%) and in the wadis Hajalij South, Hajalij North, and Umm Salam there are ibex or antelope depictions at over 90% of sites. As usual Umm Salam has the greatest number of images (147/29%).



Map 4.6. Distribution of Ibex images

4.4.2.3 Dating

Ibex are game animals and have survived in the Eastern Desert down to this day. Therefore we should expect ibex to be depicted over the past five millennia, with the highest number shown when there was the greatest human activity in the area and/or hunting them was most important. Ibex are found in clear predynastic contexts such as SAL-35 (see Figure 4.49). They are also seen in late ones, as at QAS-2 (Figure 4.33) indicated by the Greek lettering, together with Blemmye markings at SAL-9 (Morrow & Morrow, 2002: 54), and at clear pharaonic sites marked by the presence of a Horus falcon like MUA-10 (Morrow & Morrow, 2002: 107). Thus ibex are found in the rock-art over a long period of time. Many of the hunting scenes can be identified by association to predynastic motifs and therefore assigned an early date. However, where a hunter and animals are alone, no assignment is possible and these scenes could date to any period given that it is only in recent times that modern weapons have massively depleted the stock of ibex. It is apparent that hunting scenes have been added to earlier depictions in the Eastern Desert. For example, at SAL-9 (Figure 4.34) to the right of a square boat with very dark patination, almost the same as the rock surface, there is a figure holding a staff accompanied by hunting dogs chasing an ibex.

All of these possess very light patination. The boat, although darkly patinated, appears to have a sail amidships and thus the hunting scene must be considerably later than the New Kingdom. If ibex were still present in quite large numbers in the last century, they must have been even more plentiful in the somewhat moister predynastic climate and therefore the high instance of dog and hunting motifs associated with them is readily comprehensible.



Left: Figure 4.33. Untypical well-drawn ibex at pharaonic site, QAS-2, author's photo, Right: Figure 4.34. Ibex hunting at SAL-9, author's photo

4.4.2.4 Discussion

Ibex are often depicted with horns of exaggerated length, sweeping back to the rear of the body. This method of depiction occurs in rock-art that can be attributed from the predynastic period through to the latest images, so the horns have always appealed to human observers but have mostly been portrayed in an unnatural way. Judging by their prolific numbers in the rock-art, ibex have also been hunted over a long period of time, regardless of different climatic conditions. They are shown being chased by dogs and/or humans or alone or in the company of other groups of animals in early and late contexts (see Figures 4.33 and 4.49).

There are 217 instances of ibex and they can be categorised in three ways: those consisting of ibex alone not associated with other animals or with humans (22/10%), where they are part of a larger group of various animals (93/42%); and where they are being hunted (104/47%). It is surprising that many of the hunting scenes consist of ibex in mixed animal groupings where a game drive appears to be taking place. If the

petroglyph creators were merely portraying what they saw, they would have often shown ibex on their own, apart from other species. The ibex would have been well suited to the rocky Central Eastern Desert and, therefore, able to go where other animals such as cattle, giraffe, elephants and ostrich could not go. Yet they are often shown in close proximity and association with these animals. Many of the hunting scenes are also associated, and indeed integrated, with boats, since the latter are present at over seventy percent of Central Eastern Desert sites

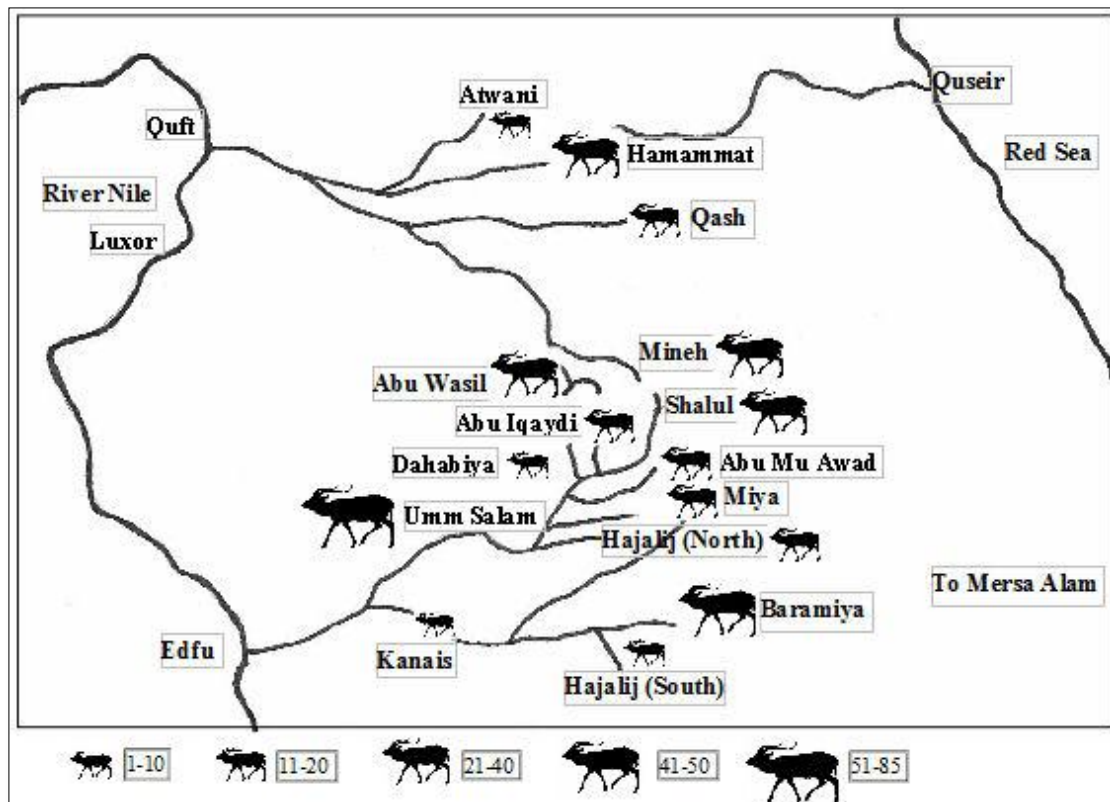
4.4.3 Antelope

4.4.3.1 The Species

‘Antelopes’ among the petroglyph surveys cover a variety of animals, including Roan Antelope (*Hippotragus equinus*), Dik Dik (*Madoqua kirkii*), Kob (*Kobus kob*), Nile Lechwe (*Kobus megaceros*), Gerenuk (*Litocranius walleri*) and Hartebeest (*Alcelaphus buselaphus*). The latter two animals can survive several days without water, while the rest need to drink more frequently. Hassan (1986) has observed that gazelles and other members of the antelope family can survive in quite arid areas, feeding on thorn bushes and scrub. The Gerenuk can do without free-standing water. These animals tend to travel in large herds in the modern day (Dorst, 1970: 233). It is mostly Gerenuk and Hartebeest which are recorded in the EDS and RATS surveys.

4.4.3.2 Distribution

There are 327 antelope images found at 114 sites. The southern wadis again predominate with 55% and 56% of sites and images respectively, and Umm Salam stands out with 83 images (the only occurrence above 50). But there are also a significant number of sites (29%) and images (27%) in the central area, where rock-art images are usually sparser (Map 4.7). 16% of sites and images are located in northern wadis, more than the 14% share of sites overall. Thus antelope images are spread throughout the wadi system and they are mainly found among groups of other animals rather than on their own. In the Nile Valley they are extremely rare (Judd, 2009: 44).



Map 4.7. Distribution of antelope images

4.4.3.3 Dating

Like ibex and dogs, antelope are game animals which have been hunted in the Eastern Desert over thousands of years, and the same comments apply to them as to ibex.

Since they appear mixed in groups of other animals they can be dated by association to them where these petroglyphs are within dateable scenes. They often appear in the rock-art in groups among ibex, a climber, and with ostrich-as happens in the wild. In general, therefore, antelope images occur over the millennia and are not concentrated in any particular era.

4.4.3.4 Discussion

Antelope are not depicted in such large numbers generally or in groups as ibex, whereas on the savannah antelope travel in large herds. The more constricted space of the wadi system and drier climate probably account for ibex being more common in the Central Eastern Desert. Among a hundred and forty three instances, only twelve (8%) depict antelope in a group on their own. Sixty-one (42%) are shown among or associated with other animals and seventy (49%) being hunted. Thus antelope are

similar to ibex in their distribution. In the wild antelope travel in herds with other animals, thus their depiction among the petroglyphs mirrors this characteristic.

Gerenuk and hartebeest can survive in a dry climate and therefore logically make up the bulk of antelope recorded. Like ibex they are distributed throughout the survey area generally in proportion to the number of wadis in each area and are also found together with those animals ibex are associated with. They were thus an important game animal for hunters over a long period of time and part of the melange of animals which are a feature of the Eastern Desert petroglyphs.

4.4.5 Cattle (*Bos primigenius*/*Bos taurus*)

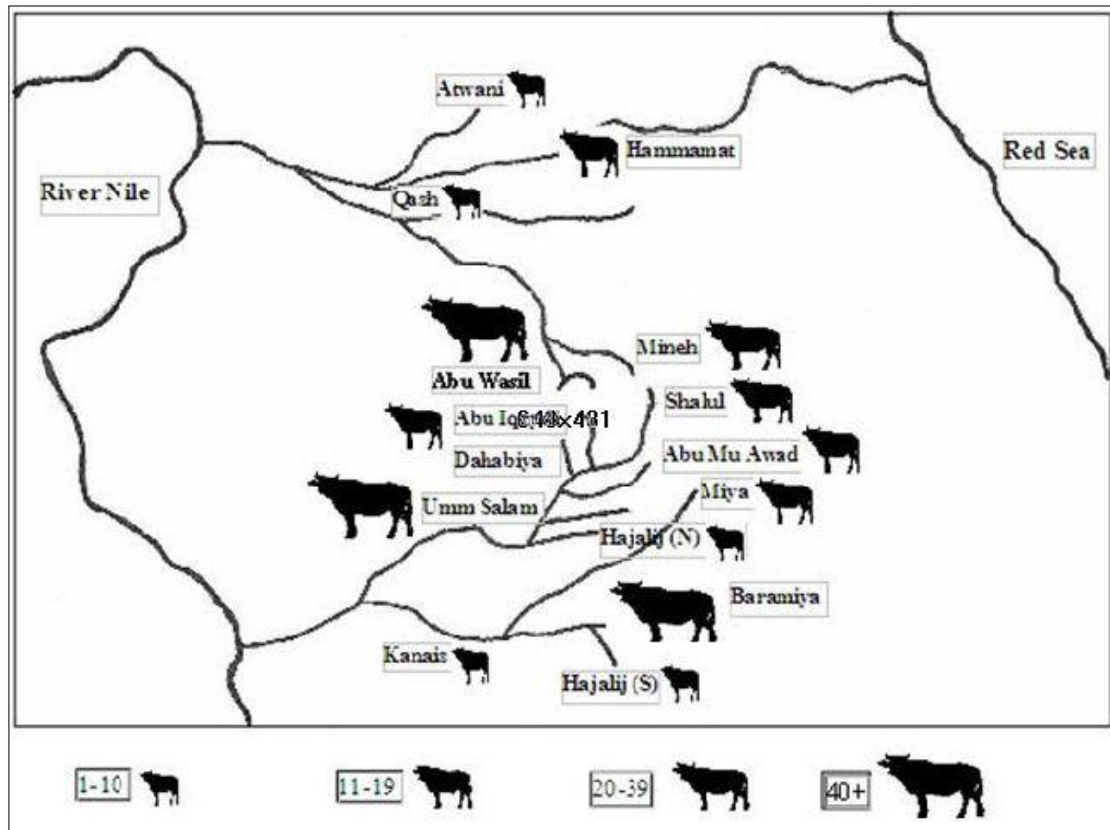
4.4.5.1 The Species

The aurochs, *Bos Primigenius*, probably spread from the Near East into Egypt in the Pleistocene (Osborn, 1998). More than 90% of cattle depictions among the Central Eastern Desert petroglyphs are of long-horn animals. Many of these are lyre shaped, although determining whether the animals are wild or domesticated purely from the horn shape is problematic (see Chapter Two, 2.1.1). Cattle are mostly grazers, but can inhabit forest, swampland and semi-desert, and need to drink every other day (Haltenorth, 1977: 106). They could thus only have been present in the Central Eastern Desert as wild animals when there were seasonal pools of water, or as domestic animals when herders could dig wells. Cattle burials are attested from the Badarian (c.a. 4,400-3900 BCE) and seventeen are present at Hierakonpolis (Friedman, 2009).

4.4.4.2 Distribution

The frequency of cattle portrayals stands in the middle of the range of images (290), but there are a considerable number of sites (110/44.5%) in the Central Eastern Desert with cattle images. They are well distributed in all the wadis, with the exception of the Wadi Dahabiya, which is a side and dead-end wadi consisting of only two sites (Map 4.8). 20 out of the 89 sites are in the Wadi Salam. Interestingly however, given its dominant numbers in many other animal types, Umm Salam has cattle images at less than half its sites and possesses fewer examples than Wadi Baramiya, which is the only wadi over 20% (57) of the total number of images. Wadis Salam (15%), Abu

Wasil (14%) and Mineh (11%) are the only others with cattle petroglyph percentages in double figures. Overall, cattle sites in the southern, central and northern areas match these areas' percentage of sites overall quite closely in terms of numbers of individual images.



Map 4.8. Distribution of cattle

4.4.4.3 Dating

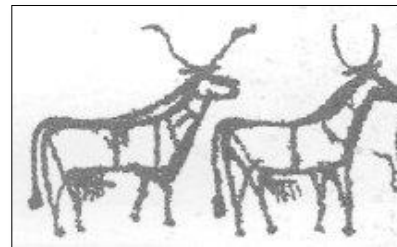
It is often difficult to distinguish images from the predynastic period from later depictions because the basic style of petroglyph remained the same. The majority of illustrated cattle depictions in the Eastern Desert petroglyphs are of the long-horned variety with lyre-shaped (see Figure 4.35) or incurving horns (Figure 4.40). These horn length and shapes have always been popular with herders. Dating by association is necessary here and it is telling that no cattle images associated with plumed/‘arms raised’ figures or predynastic type boats are shown with udders. These early animals usually have pecked out bodies and little detail of hide pattern. On the other hand, an examination of northern and north-central sites indicates that many of these petroglyphs may be assigned late dates. At HAM-1, despite the mass of often

overlapping images a number of bovids are contemporaneous with camels and ‘Blemmye’ marks (Morrow & Morrow, 2002: 202). HAM-3 (Morrow & Morrow, 2002: 208) has cattle noted, including one large well drawn example and others not illustrated. The limits of using patination for comparative dating of images are shown here. Even hieroglyphs and ‘Blemmye’ signs are darkly patinated. Where a ‘bovid’ is noted in conjunction with animals and square-hulled boats all having medium patination, these boats have mast amidships, suggesting a dynastic date. The Wadi Hammamat was a major route in pharaonic and Greco-Roman times and many of the images could date to these eras. For example, the EDS notes a late bovid at HAM-7 (Rohl, 2000: 127). At HAM-15 (Rohl, 2000: 138) a ‘hwt’ hieroglyph and lotus sniffer are present along with ibex, a ‘bovid’ and a figure with raised arms (not illustrated). In the Wadi Atwani the controlled bovid at ATW-11 (Rohl, 2000: 146) has a variegated coat and small horns. Its level of detail suggests a later date. A bovid with an udder by Greek lettering, and one superimposed on a sailing ship are late examples at QAS-3 (RME-18) (Červíček, 1986:14/15).

There are also early examples present in the northern area. At QAS-3 a multiple-plumed figure controls a bovid at this cave site used as a shelter over millenia. HAM-8 (Morrow & Morrow, 2002: 129) has the only part-painted boat in the Eastern Desert which resembles those on the Hierakonpolis Tomb 100 painting, along with various animals including bovids. These are lower on the rock face than clearly dynastic images, therefore the bovids may be of predynastic date. Finally, two figures (one illustrated) controlling cattle are present at ATW-12 in association with predynastic boats (Rohl, 2000: 148).

In the northern-central area, MIN-1 (Figure 4.36) has a calf suckling at its mother’s teats, while at MIN-9 (Morrow & Morrow, 2000: 191) a calf stands at its mother’s side plus three other cows with udders. Six well drawn bovids are present at MIN-22 (Figure 4.37), four of whom have udders. They are part of a scene with similar patination which includes two giraffes with cross-hatched markings, ibex, a bow carrying figure in an incurved sickle boat, a sickle boat with square sail amidships, and Greek lettering. This evidence suggests a late, Greco-Roman date. This site is in a wadi en route to Bir Mineh, Gebel Shalul, and the track to the Red Sea coast and Berenike, an important Ptolemaic and Roman port. At MIN-2 lightly patinated bovids

and shield-carrying figures are associated (Morrow & Morrow, 2000: 183) and lightly patterned bovids are present with udders consisting of three lines, while MIN-4 has Blemmye signs, figures with swords and shields with the ambiguous description of, “bovids, ibex and antelopes in various patinations from light to dark” (Morrow, 2000: 185). The presence of camels at this site also suggests a late date for most of the images. MIN-20 (Figure 4.38) has a ‘lassoed’ example with horns reaching round to make a circle with two appendages and a patterned body. Other figures are present, including one carved over the rear flank and another standing behind the lassoer with arms in the air-but not in the typical ‘arms raised’ figure position. The animal is much bigger than the accompanying figures. This cattle image is very different from the vast majority of depictions closely associated with Predynastic boats and figures.



Left: Figure 4.35. Cow with suckling calf, MIN-1, Morrow & Morrow, 2002: 182, Right: Figure 4.36. Cows with udders, MIN-22, Rohl, 2000: 94



Figure 4.37. Bovid with circular horns, MIN-20, Rohl, 2000: 91

Other late images are present at MUA-11 (Morrow & Morrow, 2000: 109/110), including an example in a boat. Square boat petroglyphs are present at this site, but there are also clearly dynastic type boats with double steering oars and elaborate rigging in addition to hieroglyphs. In the Wadi Abu Wasil, WAS-10 (Rohl, 2000: 104) contains the largest number of controlled bovids: six, although not all on the same rock face. All but two are on a small rock in front of the main face in a scene

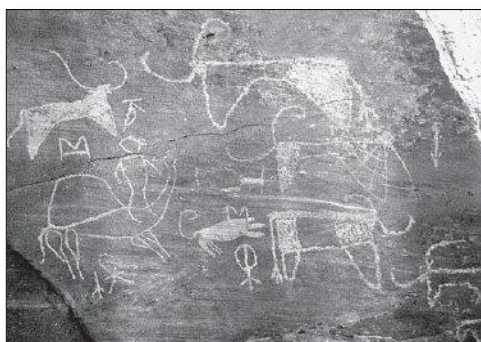
combining plumed figures with ‘arms raised’ figures, and other animals in addition to two boats. These can, untypically in the north/northern central areas, be dated to the Predynastic. Cattle depictions show a wide variety in execution, suggesting the work of many different hands, but there are certain similarities between sites SAL-27 (Figure 4.38) and 35-a clearly predynastic site (see Figure 4.49), where the bovid is head down in profile, being ‘controlled’ by a figure holding several ropes.



Figure 4.38. Bovid with head down, SAL-27, Morrow & Morrow, 2000: 77

Concerning examples in the central area, at SHA-2 a large, speckled, well-drawn bovid is associated with ‘Blemmye’ signs and various animals including camels. Cattle are also associated with camels at SHA-10 (Morrow & Morrow, 2002: 130). In addition, SHA-14 (Morrow & Morrow, 2002: 134) has a bovid in association with camels and naturalistic drawings of a lion, in addition to a naturalistic figure seated on a chair. Turning to the Wadi Iqaydi, IQA-3 (Figure 4.39) displays cattle in a unique style with distorted horns and a patched body being chased by dogs. They are associated with a camel and rider and Blemmye signs. These images can be assigned to a later period. The single bovid petroglyph at IQA-5 (Morrow & Morrow, 2002: 139) and sickle boat with a central mast indicate at least a dynastic date as masts even in the late Predynastic (Naqada III) were near to the prow. The cattle at IQA-6 (Morrow & Morrow, 2002: 140) which have well carved udders are also probably dynastic or later. The IQA-14 (Figure 4.40) cattle have varying patinations and two sickle boats are present. However, no plumed figures, hunting scenes or ‘arms raised’

figures are present and dating is problematic. Therefore, none of the Wadi Iqaydi sites may date from the Predynastic era.



Left: Figure 4.39. 'Herd,' IQA-3 Morrow & Morrow: 136, Right: Figure 4.40. IQA-14 Morrow & Morrow: 146

In the southern wadis cattle tend to be an integral part of scenes, which have arguably predynastic components. One exception is a large cross-hatched example at HAJ-4 (Morrow & Morrow, 2002: 37) associated with spear carrying riding figures and a boat with a triangular steering oar. SAL-3 (Morrow & Morrow, 2002: 46) has a twin-plumed figure with bow controlling a bovid with its head turned to the side by a rope to one horn. This pose is rare in the Eastern Desert petroglyphs. Man and beast are followed by dogs, ibex and Barbary sheep. Various boat types are also present. It is easier to assign a predynastic date to the latter example than to HAJ-4. But, given the variation in depictions of cattle even at sites that can be assigned to the Predynastic period, not every embellished image may be of a late date. For example, a large bovid with a speckled body has been pecked over two animals of darker patination at SAL-23 (Morrow & Morrow, 2002: 72) and may not be early.

An exception to the usual rule that patterned cattle images are late can be seen at SAL-35 (Morrow & Morrow, 2002: 84). A multi-plumed figure holds ropes leading to a bovid in head down position. Three 'arms raised' figures are present, another multiple-plumed figure with hands on hips plus ibex, ostriches, dogs and a giraffe. A further example where a late date for a more detailed animal cannot be assumed is found at SAL-44 (Figure 4.41). Here a square boat with a 'frond' on the prow and single-plumed figure amidships of a type usually dated to the Predynastic, is carved over a large bovid of dark patination on a boulder scene having medium/dark

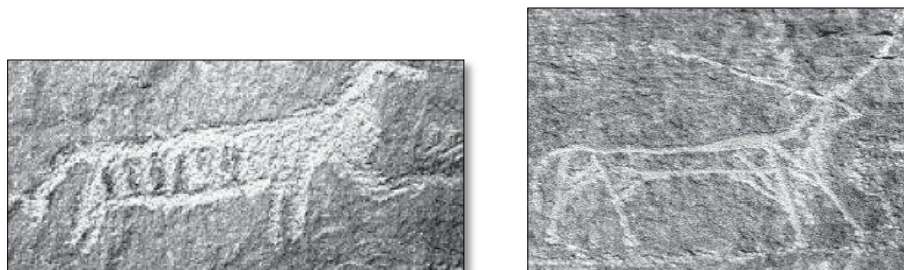
patination. Smaller, pecked out or spotted examples of bovids are found in predynastic scenes compared to larger, incised animals in later scenes. Cattle are associated with a plumed figure at MUA-3 (Morrow & Morrow, 2002: 100) where four figures hold ropes attached to four bovids' horns, and at MUA-10 (Morrow & Morrow, 2002: 107). Here a single-plumed figure controls a bovid in the same manner, and another plumed figure 'lassoing' a bovid is not illustrated.



Figure 4.41. Bovid & boats, SAL-44, Morrow & Morrow, 2002: 94

The road through Wadi Baramiya was a route to the gold mines over thousands of years and examples over a wide time period are to be expected. There are three predynastic type boats at BAR-1 (Morrow & Morrow, 2002: 154) of a kind seen on the Tomb 100 wall painting at Hierakonpolis, but also a Horus falcon and pharaonic figures. BAR-2 (Morrow & Morrow, 2002: 156) is similar, with incurved square boats but also a Horus falcon. Four “tethered bovids” are not illustrated. Two other bovids on separate boulders are said to be dissimilar. One (Figure 4.42) with vertical lines on its flank has its head turned completely to the side, and the other is (Figure 43) well drawn and although noted simply as a bovid appears to stand in a boat. This is further evidence that banded and other patterned examples can be assigned a late date. BAR-3 (Morrow & Morrow, 2002: 158) has only possible cattle motifs, while BAR-8 (Rohl, 2000: 48) appears to have images from predynastic and dynastic dates. One very large, variegated, bovid is of a similar patination on an exposed rock surface to hieroglyphs naming Tuthmose I, while two others (see Figure 4.49) are each controlled by a plumed figure similar to an ‘arms raised’ figure among a herd of ibex.

Four further sites have no useful context or the identification of a bovid is doubtful. At all the other nine sites where cattle are shown they are reported or illustrated in association with boats, hunting figures and dogs, and sometimes giraffe, and therefore can be probably assigned an early date.



Left: Figure 4.42. Bovid with horns to front, BAR-2, Morrow & Morrow, 2002: 155, Right: Figure 4.43. Bovid, BAR-2, Morrow & Morrow, 2002: 157

In conclusion, another method of dating may be to use the water sources present in the wadis as a guide to the presence of cattle at certain periods. Cattle need to drink every day to be in prime condition and every other day to survive, as opposed to gazelles who can obtain all the fluids they need from their food. Even in a climate which was moister than today, wild cattle would have needed permanent water sources as well as rock pools, as at the so-called ‘Jacuzzi’ site, SAL-14. It is notable that the two sites which are likely to have been water sources, SAL-14 and WAS-10, also have the two highest incidences of bovid images-ten each. Wild cattle would have been present in the early Predynastic (Naqada I/Naqada II a/b) rather than in the late and pharaonic periods. Thus, the number of sites with cattle petroglyphs assigned a predynastic date can tentatively be set at seventy-seven, with twenty-three pharaonic/late sites and therefore cattle are a feature of the predynastic period. Sites in the southern wadis are overwhelmingly early, while those in the core central wadis of Abu Iqaydi, Shalul and Dahabiya are conversely pharaonic or later. In the north-central Wadis, Mineh tends to have later sites, while in Abu Wasil predynastic examples predominate. In the north, with the exception of Wadi Atwani, most animals are late.

4.4.4.4 Discussion

It is significant that 44% of the occurrences of cattle are single depictions, as this militates against the presence of herds. The highest numbers (ten in each case) are

present at WAS-10 and SAL-14, both locations where the past presence of a water pool or small lake is discernable and would have attracted animals and/or their pursuers. As with all the fauna the site recorders were sometimes vague about numbers and instances are marked as ‘bovid.’ But the impression given is mainly of small groups of cattle, sometimes involved in hunting scenes, not generally of large herds attended by family groups-especially given the large number of sites (110) combined with a middling number of images (290). This is in contrast to the situation at Iheren in Algeria (Holl, 2004:17) or in the Nile Valley (Judd, 2009: 46) where large herds are indicated.

Human figures are never depicted riding bovids or any structure shown on a bovid’s back in the Central Eastern Desert, as indicated in the Algerian rock art and reported in a few cases south of the Wadi Baramiya (Judd, 2006). At 35 (32%) of sites cattle are shown being ‘controlled’ by a human figure. EDS and RATS mix the terms ‘tethered’ and ‘lassoed,’ but both refer to images where a figure holds a rope leading to one of an animal’s horns. At four sites: BAR-2 (Figure 4.44), MUA-3, WAS-10 (RME-26, Figure 4.44) and ATW-12 (RME-15, Figure 4.45) more than one animal is involved, although at the latter the two examples are not in a group. In addition, at WAS-10 (Figure 4.46) and ATW-12 (Rohl, 2000: 147, not illustrated) a tethered animal is being slaughtered by a figure with a bow. In the Nile Valley there are no clear examples of cattle being hunted, although depictions of control by a rope to one horn are found (Judd, 2009: 46).



Examples of ‘control’ Left: Figure 4.44. BAR-2, author’s photo, Right: Figure 4.45. ATW-12 Rohl, 2000: 148

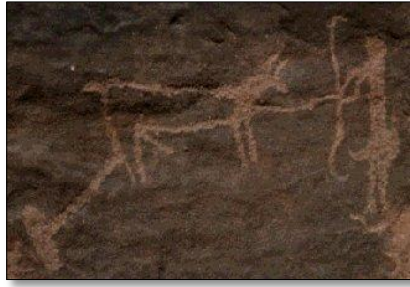


Figure 4.46. WAS-10 slaughter scene, author's photo

Domestication of cattle is not much in evidence and there are few herds. The vast majority of cattle depictions are not even shown as 'controlled' and at over a third of the sites (35%) are mixed in with other animals such as ibex with hunting figures nearby. This complicates the issue as to whether the bovids are wild or domesticated. The controlled animals are not large animals in comparison with their 'controllers.' With domestication a reduction in animal size usually results. It would be extremely difficult to lasso and capture a wild aurochs, which was a fierce and dangerous animal. Domestication would have probably taken place through capturing and taming very young animals. The 'controlling' scenes do not, with two possible exceptions, show strenuous or violent activity, corrals, or groups of humans surrounding a beast in order to capture it.

Where groups of human figures are associated with cattle they are usually either chasing a group of animals or following the action. Figure 4.47 at WAS-10/DR-2 is illustrative and typical with armed human figures attached by rope to one horn of a bovid. In addition, most of the cattle petroglyphs have pecked bodies and although recognisable from body and horn shape are relatively crudely executed. There are a few examples where body markings are shown. Ten sites have images illustrated where a variegated skin pattern is indicated; six with spotted patterns. The lack of interest in showing udders and hide patterns also suggests most animals portrayed are wild. Herders would be concerned with the production of milk and in producing animals with distinctive hides and horns.

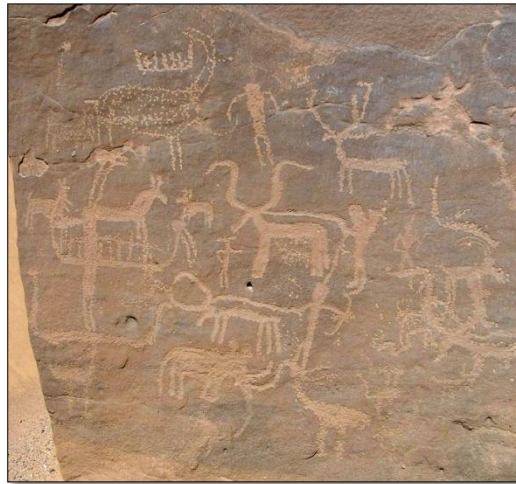


Figure 4.47. WAS-10 mix of cattle and other animals, author's photo

A hunter and perhaps herders' route can be traced down the Wadi Mineh into the Wadi Abu Wasil. It is noteworthy that only one branch of the Wadi Abu Wasil has petroglyphs-the one which connects to the Wadi Mineh, and this has 11 sites with mostly early bovids. Since there are no early cattle representations in Wadi Dahabiya, none attributed in Wadi Iqaydi to the Predynastic, and only three in the Wadi Shalul, a herders' route via these wadis is less likely judging by the paucity of images. A hunter and perhaps herders' route can also be postulated from the east-west section of Wadi Batur (map Morrow & Morrow, 2002: 23) into Wadi Baramiya. Further north in the southern wadis, in the Wadi Umm Salam 18 out of 46 sites have 'predynastic' cattle petroglyphs. Eight of these have 'control' motifs. In addition, two out of the three Abu Mu Awad sites with bovid images, including the one with multiple controlled motifs, are situated at the apex of the fork between the two wadis leading from Wadi Batur (Morrow & Morrow, 2002: 97) so that they are almost part of the Wadi Umm Salam. Thus the Wadi Umm Salam is a major cattle pursuit route.

4.5 Canines

4.5.1 Dogs (*Canis familiaris*)

4.5.1.1 The Species

The survey publications report both tjesem and pariah dogs, more correctly referred to as hounds owing to their role in hunting. The tjesem is slender and has pricked ears with a curled tail (Osborn & Osbornova, 1998). It can be seen on a Naqada I C-Ware bowl (Figure 4.48). Pariah dogs possess broad heads, pointed ears and long tails

(Osborn & Osbornova, 1998). Dogs of various types can be seen on Naqada I and II pottery, on palettes and knife handles in Naqada III and remains have been found in Nile Valley contexts over a wide geographical area and period of time. In the Central Eastern Desert they are seen in the petroglyphs either in the company of human figures engaged in hunting, but also chasing other animals with no people portrayed. Wild dogs inhabit the African savannah and live in packs of 6-20 animals, although groups of up to 40 have been recorded (Dorst, 1970: 102).

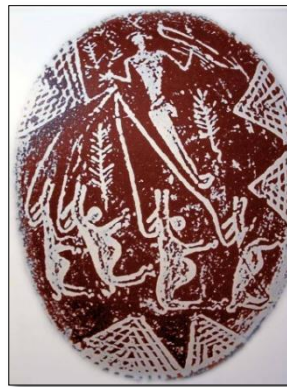
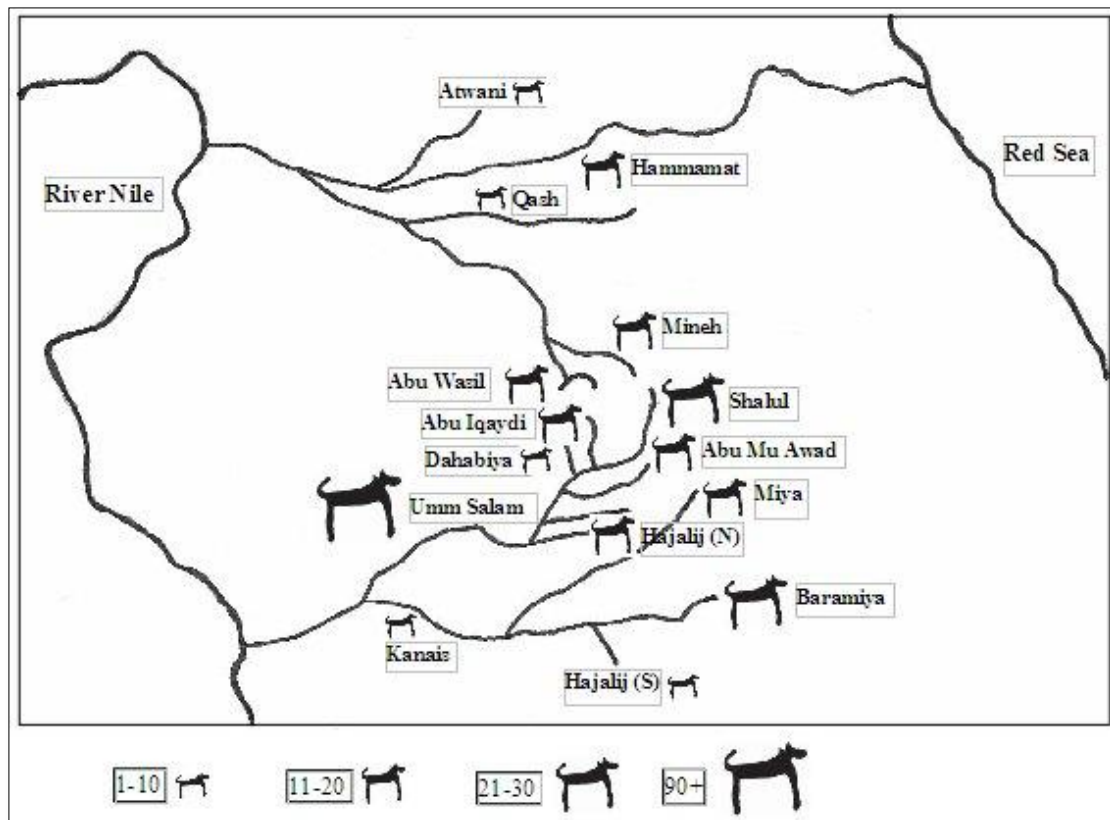


Figure 4.48. C-Ware bowl with hunting dogs, Pushkin Museum, Moscow, author's photo

4.5.1.2 Distribution

Petroglyphs of 317 dogs are found at 102 sites (40%) and are well represented in all the wadis, only falling below a presence at 25% of sites per wadi in Wadi Abu Wasil (Map 4.9). It is notable that the largest number of dog images by far (96), three times as many as in any other wadi and constituting 31% of the total is in the Wadi Umm Salam. Wadi Baramiya is next with 18.5% (58). No other wadi has a percentage in double figures. The next highest number is in Wadi Shalul (21/6%). Dog images are considerably rarer in the northern wadis, constituting only 7.5% of the total.



Map 4. 9. Distribution of dog images

4.5.1.3 Dating

Given that dogs are involved in chasing down game animals such as ibex and antelope, and that hunting of these animals has taken place for thousands of years in the Eastern Desert, it is unsurprising that dog petroglyphs appear to date from a very wide period. They can be seen in large predynastic hunting scenes at BAR-10 and SAL-35 and in a very late context, probably Greco-Roman, at MIN -22. Since so many dog images are located in the mainly predynastic Wadis Baramiya and Umm Salam, a considerable proportion of the images in the south have an early date. By comparison, in the central area Wadi Shalul has a significant number of dog images in hunting scenes, but these are often associated with the horse and camel period. Dog images occur in similar contexts over a long period of time, leading to standard, stereotypical images.

4.5.1.4 Discussion

At over a third (36) of the sites there are dogs either directly attacking or chasing a quarry; usually an ibex or antelope. In the others they are part of general hunting

scenes. BAR-10 (see Figure 4.32) is illustrative of the hunting scenes in which dogs are involved. Three packs of dogs accompany seven hunters carrying bows surround their prey-antelope and wild asses. At the top, four dogs at the front and five at the rear corral an ibex and an ass. Below, eight dogs working in concert attack an antelope. One grasps the quarry by its neck and another by its nose. Meanwhile, in the foreground one dog at the front and one at the rear go for an ibex. Many of the depictions of hunting scenes are associated with boat petroglyphs and ‘arms raised’ figures, and contain a wide variety of animals. For example, SAL-35 (Figure 4.49) has ibex, antelopes, bovids, ostriches, dogs, a giraffe (which may be earlier), three multi-plumed figures and three arms raised figures. This combination will be dealt with further when considering the ‘arms raised’ figure motif. At SAL-7 (Morrow & Morrow, 2002: 50) there is a row of mixed figures and animals partially covered by the wadi floor so that the images had to be excavated, showing that here at least the wadi floor has risen over time and not been washed out. The figures and animals include dog and ibex. In these examples dogs are working in concert with human hunters, but there are also 27 examples of them chasing animals without any human figures being depicted. In these cases they may even represent wild dogs observed by travellers through the wadis. There are over a hundred hunting scenes in the EDS/RATS corpus either directly involving dogs or with dogs present.



Figure 4.49. Figures among hunting scene, SAL-35, author's photo

4.6 Birds

4.6.1 Ostriches (*Struthio camelus*)

4.6.1.1 The Species

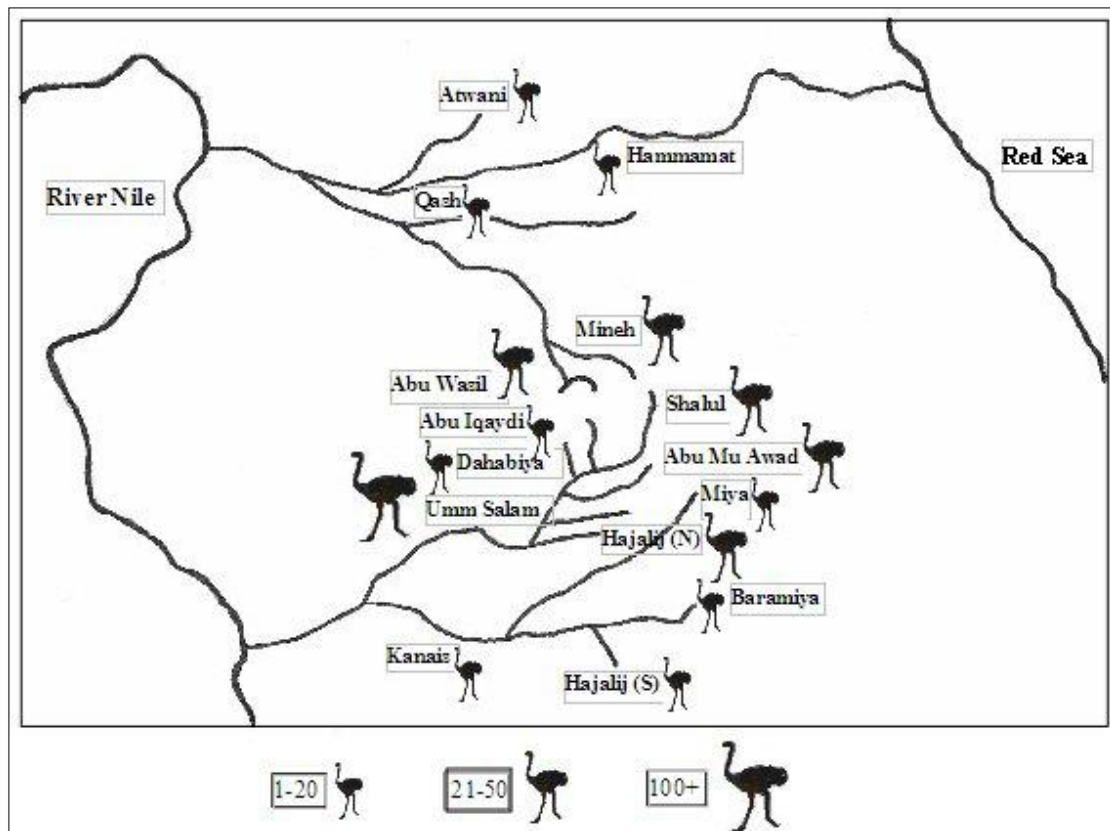
Although ostriches inhabit the savannah in modern times, they are comfortable in semi-desert environments and there is evidence of their presence in Egypt until at

least the second half of the nineteenth century (Manlius, 2001). They are tolerant of the heat, can feed on a wide variety of plants and internally manufacture their own water, topping it up with moisture from vegetation. Ostrich can live in sandy areas, preferring low bushes to trees. They normally spend winter months in pairs or alone. But during the breeding season and in rainless conditions they live in flocks of up to fifty birds led by a large hen. On the savannah they often travel with other grazing animals such as antelope (Donegan, 2002).

4.6.1.2 Distribution

Ostriches occur at over one-third (95/38%) of sites, close to the frequency of dogs (40%). With 449 images the ostrich is the second most commonly portrayed animal after the ibex. Over two-thirds (68%) of the images are found in the southern wadis, and very few in the north (5%) (Map 4.10). Wadi Umm Salam stands out in having 35% of the total number of ostrich images. The only other wadi with a percentage in double figures is Wadi Baramiya (14.5%). At 59 of these sites (62%) there are two or more representations, including considerable flocks of the birds at 10 sites.

Sometimes these groups can contain as many as 14 birds, as in the case of SAL-14, or even 45 as at SAL-40 (Figure 4.50). At BAR-13 a larger bird at the front and rear appear to be shepherding a family of younger birds (Morrow & Morrow, 2002: 155). Most of the pecked images show just the body, legs and distinctive long neck of the ostrich. However, at SAL-36 two birds are shown displaying their wings (Morrow & Morrow, 2002: 85).



Map 4.10. Distribution of ostrich images

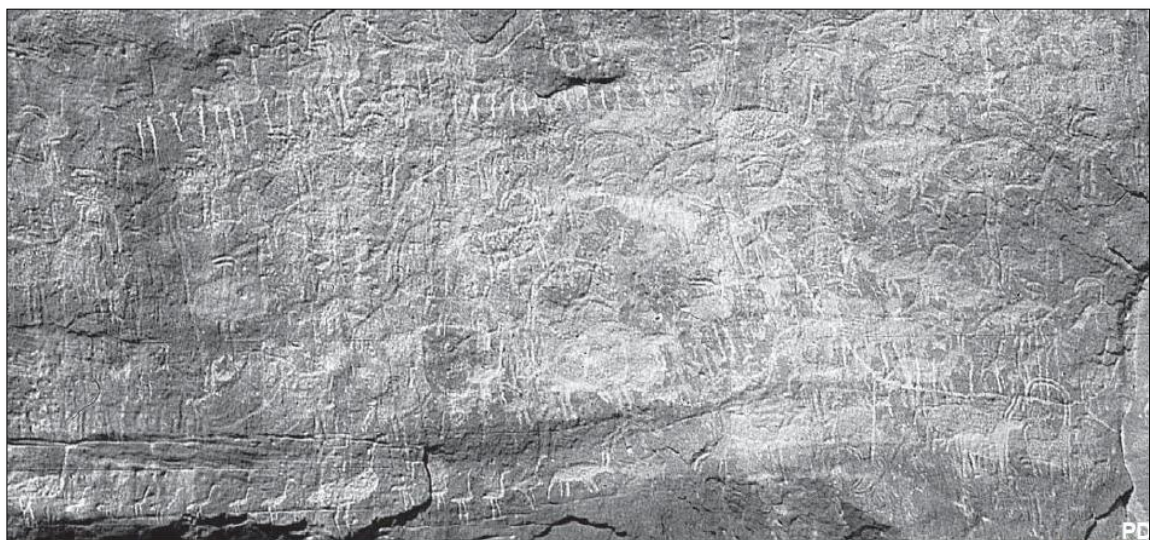
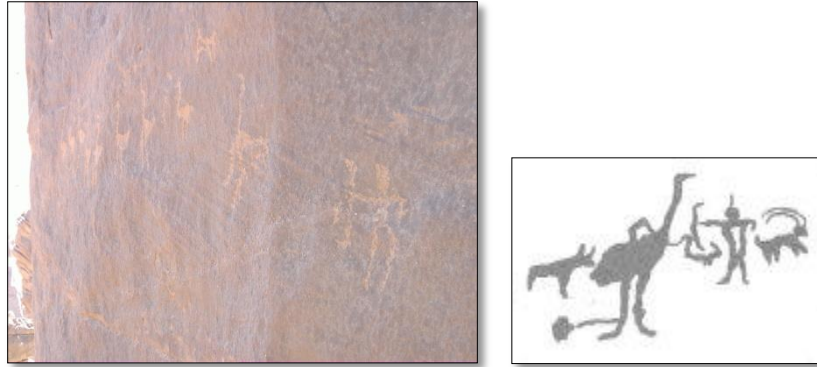


Figure 4.50. Large flock of ostrich, SAL-40, Morrow & Morrow, 2002: 90

Ostriches are represented in all the wadis and in 15 cases (16%) are being hunted by human figures with dogs. At WAS-14 (Figure 4.51) a row of 9 ostriches is on one face of a rock with a hunter carrying a bow just round the corner out of sight. This is the only example of a rock-art creator taking advantage of the rock surface to portray

hiding and stalking. There is a single example in the Wadi Mineh at MIN-20 of a tethered ostrich being slaughtered by a single-plumed bow-wielding hunter (Figure 4.52) and one recorded by Winkler at WAS-10/DR-2.



Left: Figure 4.51. Hunter & ostriches, WAS 14 author's photo Right: Figure 4.52. Tethered ostrich kill, Min-20, Rohl, 2000: 91

4.6.1.3 Dating

Ostrich petroglyphs are associated with dateable images over a wide time period and have greatly different patinations. Since nearly 70% are found in the southern wadis where predynastic sites are in a majority, and especially in Baramiya (2:1) and Umm Salam (4:1), it is likely that most can be assigned an early date. However, flocks can be found at predynastic, late, mixed and unidentified sites. This is shown by ostrich images having a wide variety of patinations. For example, while the ostrich associated and the boat at WAS-3 have the same patination as the rock surface, ostriches with outstretched wings pursued by men on camels can be found 250 metres away with medium patination. A further 80 metres to the right, figures with bows hunt ibex and ostriches of an even lighter patination (Morrow & Morrow, 2002: 175). These examples indicate that ostriches were present in the Eastern Desert and portrayed in petroglyphs over a long period of time. Moreover, the boat at WAS-1 is an isolated example, with perhaps a triangular bladed steering oar, with an awning and a medium patination compared to feathered hunters nearby. This suggests a late date and could represent transporting a bird to a corralled hunt or Nubian tribute/trade. Overall, although the moister climate of the Predynastic would have seen larger numbers of birds and considerable hunting activity, ostriches are depicted over a wide period.

4.6.1.4 Discussion

Ostriches are portrayed in the rock-art in numbers ranging from singletons to large flocks and are often seen among depictions of other grazing animals. Thus their depiction matches what we know of their behaviour in the wild in that they are solitary part of the year and social at other times (Donegan, 2002). There are examples of ostriches being hunted by men and dogs, by dogs alone, and (rarely) trapped-perhaps for the feathers to make the plumes on the human figures in the petroglyphs. There are many examples of ostrich eggs in Nile Valley graves from the predynastic era through the pharaonic era, but despite virtually no remains having been found, tomb paintings show birds corralled for staged hunts (Manlius, 2001).

In addition to being in flocks there are four examples of an ostrich apparently standing in a boat (HAJN-3, MUA-11, WAS-1 and WAS-3). At HAJN-3 the two ostriches are associated with the right-hand of three boats (Figure 53). Another part of this site has a group of asses within the confines of a boat but not touching the deck. There is a group of ostriches at the same site over-carved on boats, but having a similar patination. This suggests that animals at this site may not actually be standing on the boat itself. Four ostriches stand on a square boat at MUA-11 (Figure 4.54). The vessel is immediately below a boat petroglyph of dynastic design with two rear steering oars, but there is only a line diagram and no photograph to compare patination. Moreover, the bird at the far left may be drawn over the hull and not on deck. Thus, the ostriches may be later additions. In addition, there is a clear association at WAS-1 (Figure 4.55) since the ostrich stands next to a human figure inside an awning or cabin. Further in the Wadi Abu Wasil at WAS-3 (Figure 4.56) there is an ostrich in the rear of the boat, but it is not quite attached to the line of the deck. So there is only one clear example of an ostrich standing in a boat.

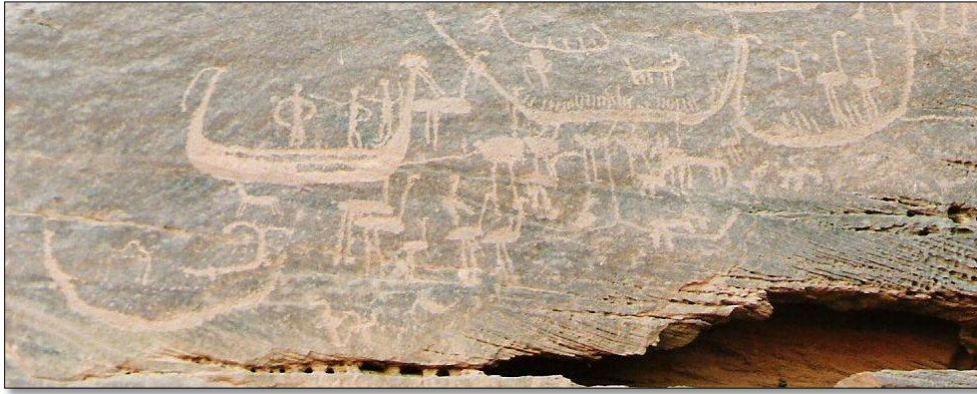
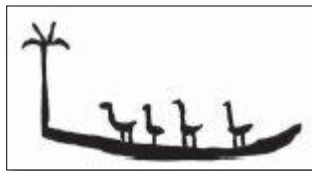


Figure 4.53. Ostriches in boat scene at HAJ(N)-3, photo courtesy C. Hanson



Left: Figure 4.54. Ostriches on deck, MUA-11, Morrow & Morrow, 2002: 110 Right: Figure 4.55. Ostrich & figure under boat canopy, WAS-1 Morrow & Morrow, 2002: 171



Figure 4.56. Ostrich above deck line, WAS-3, Morrow & Morrow, 2002: 173

4.7 Other Animals

There are 6 felines (3 leopards and 3 lions), 24 oryx, 6 Barbary sheep and 3 birds aside from examples of the Horus falcon. The oryx usually occur in late scenes in the horse and camel period. Gazelles and addax are also mentioned in the survey reports but the lack of numbers and detail in the pecked images made them hard to distinguish and to include as a separate category. The gazelle can survive by gaining liquid from vegetation and does not require standing water sources (Linseele & van Neer, 2009). Thus, either this small animal was not present in numbers in the Central Eastern Desert-which is unlikely given their presence in large numbers into modern times, or was not considered worthy of note. Species absent from the rock-art corpus

are zebra and wildebeest. This suggests they were not present in Egypt in the predynastic and pharaonic periods, otherwise these extremely distinctive animals would probably have been shown. Domesticated sheep, goats, and other domestic animals such as pigs, ducks, and cats are also absent, as are hares and hedgehogs. In addition, there is only one, probably modern, example of a fish. The pattern recurs in the Nile Valley and Nubia (Judd, 2009). This is in contrast to small animals such as hares and hedgehogs being portrayed in pharaonic tomb paintings. No leopards or lions can be attributed to the predynastic era, although the hunting of lions is present on Naqada III palettes. Falcons are present on boats of Naqada III and Early Dynastic type, in serekhs, or alone in formal pharaonic style except for one site in the Wadi Qash which has five. Finally, although they are not a significant feature of this study, horses and camels are overwhelmingly found in the central wadis, especially Wadi Shalul.

4.8 Conclusion

There are over 2200 animal depictions out of approximately 4000 images in the survey publications. Large and riverine creatures are rare. Among them, elephants are shown throughout the survey zone-including being well represented in the northern area, while hippopotami occur more than once only in the southern wadis of Umm Salam and Hajalij North. It is also notable that in thirteen out of fifteen instances of hippopotami they are located in southern wadis, whereas they do not occur at all in half the wadis, and are absent totally from the three central wadis and the two most northerly wadis of Hammamat and Atwani. ‘Crocodiles’ are never found at more than two sites in a wadi and are not present among the petroglyphs in six of the fourteen wadis. Notably, they are also not found at all in the central wadis. If the contested Wadi Atwani examples are excluded, a strong southern bias is again evident. Overall, the distribution pattern of animal petroglyphs shows a significant bias towards the southern wadis concerning images of hippopotami, crocodiles, giraffe, dogs, asses, and ostriches. On the other hand, elephant, cattle, antelope and ibex depictions are spread more or less evenly across the Central Eastern Desert. Aside from the disputed ‘crocodiles’ in Wadi Atwani, no animal image is concentrated in the northern wadis. Concerning dating, the images represented in the south are of predynastic date in the

main, while those spread out over the survey area cover a wide period from the Predynastic to modern times (Table 4.3).

Animal	Distribution Bias	Dating
Hippopotamus	South	Predynastic
Crocodile	South	Predynastic
Elephant	All areas	Predynastic to Greco-Roman
Giraffe	South	Predynastic through to Greco Roman
Ass	South	Predynastic
Ibex	All Areas	Predynastic through to Modern Times
Antelope	All Areas	Predynastic through to Modern Times
Bovid	All Areas	Predynastic through to Greco-Roman
Dog	All Areas	Predynastic through to Modern Times
Ostrich	South	Predynastic through to Modern Times

Table 4.4, Summary of distribution & dating of animal images in the Central Eastern Desert

It is significant that no animal motif has a main concentration in the north, suggesting that hunting was not a major activity there. Riverine mammals, crocodiles and hippopotami, were not actually seen in the survey area and therefore their images were not created from direct observation but from memory of observation in the Nile. Moreover, except for the crocodile-dog/lion and the crocodile seizing a man, other crocodiles, in addition to many of the hippopotamus images, are included in general hunting scenes in the Predynastic. This is an unrealistic situation that could not have been seen in real life and represents a deliberate creation of an ‘impossible combination’ of motifs. It is also in complete contrast to examples of crocodiles and hippopotami in the Nile Valley, in that hunting scenes are not found where the

animals actually lived, whereas there are hunting scenes in the desert where they did not.

Regarding the ungulates (asses, ibex, antelopes and cattle), those animals, such as antelope and ibex, which have ranged over the Central and indeed the entire Egyptian Eastern Desert over the millennia and down to the present day are both well represented among the petroglyphs (nearly 40% of the total) and distributed proportionately all over the survey area. The very small numbers of gazelle shown indicates that they were not of interest to the predynastic rock-art creators, perhaps being too small to be of concern. It also seems unrealistic to see climbers such as the ibex combined with antelope grazers, giraffe and even elephant. In real life the latter would have caused other animals to keep their distance, but are included in the same scenes. The vast majority of cattle images represent wild examples and many are present in the predynastic 'Integrated' hunting scenes. In the Central Eastern Desert there are no clear examples of domestic herds with accompanying herders, in contrast to the Sahara, nor are any cattle shown with saddles or structures on their back which are present south of Wadi Baramiya.

Hunting is the predominant theme of the animal petroglyphs in the survey area having taken place over the millennia, and indeed it continues to this day. While hunting scenes are rarer in the north, in the central Wadi Shalul dogs are seen together with horse and camel riders chasing down prey. The bias of dogs towards the southern wadis is accounted for by the large number in the overwhelmingly predynastic Wadi Umm Salam. Here, hunters overwhelmingly chase down their prey with dogs and bows are extremely rarely used, in contrast to hunting scenes elsewhere. Ostriches appear with ibex and antelope to have been one of the main prey judging by their overall number and their often featuring in hunting scenes. Occasionally depicted eating from a bush, and accurately shown in flocks guided by adult birds, their prominence may be connected to the figures seen with plumes, which are probably ostrich feathers.

Not all animals were made using the same technique. Two techniques are observed: pecking out bodies fully and creating them in outline. Among late giraffe and bovids there are more examples of images created in outline. With the exception of these and

some hippopotamus representations, most animal depictions have pecked out bodies and are not very realistic, especially those which can be dated to the Predynastic. Giraffe with completely pecked out bodies are invariably early and overwhelmingly so in the south. Bovids are almost equally divided between those with pecked out bodies and those in outline or with a patterned hide. Again, the former are mainly predynastic and the others mostly late. The integrated scenes have an early date and indicate that these petroglyph creators were more interested in the composition than in individual accuracy. Dogs, ibex, and antelope are always in-filled and ostriches are mostly so. Small animals are more difficult to hammer out in detail and this may account for images from all periods being hammered out. It is also possible to infer some general characteristics regarding the way in which animals are portrayed. It is interesting to note that some features of animals' anatomy are exaggerated, especially in the far-reaching sweep of the ibex horns. In addition, elephant ears are most often portrayed above the head, contrary to life, suggesting that large flapping ears were considered notable by many petroglyph creators. Giraffe are also sometimes shown with tails having impossibly long tufts and elongated cloven hooves.

Most of the animals shown in the petroglyphs, with the exception of hippopotami and crocodiles, are those which people actually travelling in what is now the Central Eastern Desert would have seen there. Generally, travellers in the Eastern Desert, whether they were hunting, herding or on mining/trading expeditions, were usually more interested in depicting the fauna around them than these dangerous and feared Nile Valley animals. But where they are depicted, the crocodiles and the hippopotami are part of the hunting scenes of central importance in the desert rock-art. Regarding giraffe, both Wadis Baramiya and Umm Salam are narrow wadis and animals passing through could be trapped because of lack of space available to escape. Thus the considerable number of animal images shown there were probably seen elsewhere and created by people stopping at sites such as SAL-14. This has the most images from any single site (9), probably from different periods. Resting travellers could get water from the pool, rest, and add more images to the more than ninety in the tableau. Other images are either probably locally observed examples such as the adult and baby at MIN-13, could be remembered from the Nile Valley, or brought up from Ethiopia in the Greco-Roman period such as those at MIN-22. Those shown in boats may therefore be captured animals being transported. Among the Central Eastern Desert

petroglyphs no large herds are shown, perhaps because although the presence of plentiful acacia would have been attractive, the lack of standing water would have kept numbers down.

Some images, notably those of giraffes and elephants, are often pharaonic or Greco-Roman and thus date from a time when these animals would no longer have been living in the area. They must therefore represent tribute or trade animals. Judd (2009) reports examples of both of these images south of Baramiya in the wadis of the Kom Ombo drainage basin. Given that there are predynastic motifs in this area too, many desert animal petroglyphs which can be dated would appear to have a connection with the Naqada culture and to a lesser extent with the pharaonic civilisation. Animal burials have been reported at Hierakonpolis and Naqada, but not at Abydos in the predynastic era (Flores, 2003; Linseele, 2009). Hierakonpolis is particularly a centre of animal interment in this period. The small number of elephant and giraffe burials there (3) may be animals from Nubia. Certainly, while Naqada I C-Ware has examples of both elephants and giraffe, there are none on the Naqada II D-Ware pottery. This suggests either the animals were no longer present in the Central Eastern Desert, or were of no further interest. The continued importance of the giraffe into the dynastic era, its presence on Naqada III palettes, and its adoption as a hieroglyph (“to foretell”) means that due to aridification and hunting, these animals being no longer there, later examples may therefore represent tribute and trade. It is also significant that Hobbs (1989) reports only scattered examples of animal petroglyphs north of Wadi Qena and that there are none of the large animal combinations or association with boats.

The amalgamation of animals among the Central Eastern Desert petroglyphs, often being hunted, with boats and ‘arms raised’ figures is additionally seen south of Baramiya in the Kom Ombo drainage basin. Also significantly, although prey animal images such as ibex and antelope are spread throughout the survey area, hunting with dogs is most prominent in the south. These scenes are not evident north or east/south-east of the whole EDS survey area (Judd, 2009). Petroglyphs in the latter area are mainly camels, cattle and Horus falcons, suggesting that petroglyphs in the Eastern Desert but outside the Central Eastern Desert core survey area and the Kom Ombo Drainage Basin are generally later in date. In the following two chapters human

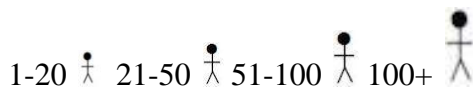
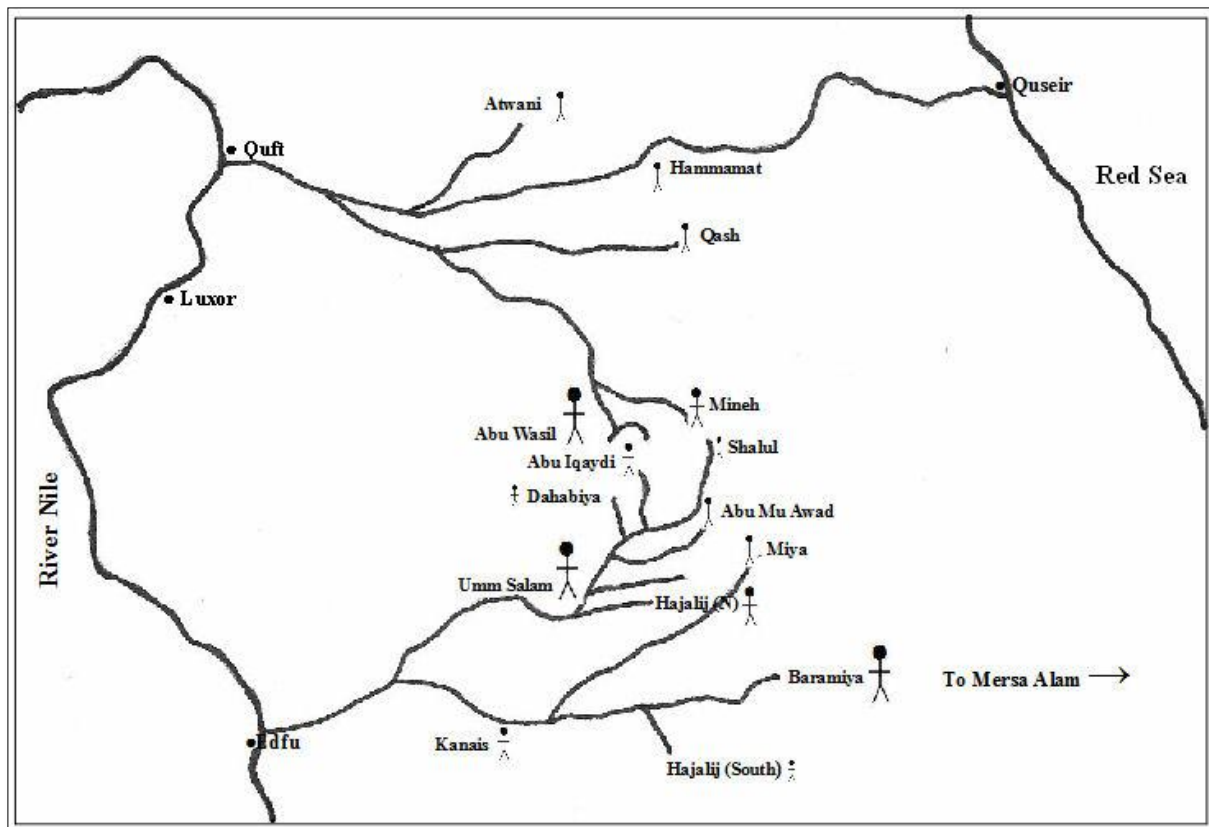
figures and boats are considered. It will be apparent from that it is the combination of these motifs with animal images which mark out the Central Eastern Desert as a 'special' area with the Eastern Desert and the areas of Egypt as a whole where rock-art is found. Reasons for this combination will be examined in Chapter Eight.

Chapter Five

Human Depictions

5.1 Introduction

Human figures are a major feature of the Central Eastern Desert petroglyphs (Map 5.1), 986 (Table 1, Appendix Three) being present at 204 (83%) sites, more than the percentage of boat representations (76%) but below that of animals (90%). Moreover, there are human images (not including ‘crew’) at all but twelve of those sites with boat images. In this chapter a typology is presented for these images which will then assist identification of the activities in which they participate, in addition to outlining their distribution and dating. The typology fundamentally consists of a division into basic human image shapes. In addition, the depiction of adornment with feathers, the carrying of weapons and other hand-held objects such as a staff, gender and posture-especially of the ‘arms raised’ figures, is examined. For each aspect of the typology the distribution of the images is detailed and the figures are dated. Themes arising from the activities: animal control, hunting, human figures standing boats, and combinations of features of figures are discussed as a basis for interpretation of the meaning of and motivation for these in Chapter Eight.



Map 5.1. Distribution of human figures in the Central Eastern Desert

5.2.1 Typology

First, the 988 human images are divided here into eight types: ‘Realistic,’ ‘Stick,’ ‘Triangular,’ ‘Naqada,’ ‘Pharaonic,’ ‘Other,’ ‘Horse & Camel Riders’ and ‘Not Identified’ (see Figure 5.1 & Table 5.2 below). Next, sixteen features and activities relating to the figures are outlined and matched against each of the six types. These relate to adornment and comprise the presence of one, two, or three-plus plumes. Then, the possession of a weapon such as a bow, throw-stick, spear, sword and shield is considered. Following this, personal details, whether a figure has a phallus, ‘tail’ type 1, or ‘tail’ type 2 are noted. Control of cattle and also control of another animal, and examples engaging in hunting are covered next. Figures standing in a boat are outlined as are those in the classic ‘arms raised’ position where the arms are above the head and curved inwards and then those with their arms lifted but not incurved are examined. Finally in this section, combinations of these accoutrements and activities are considered. Particular reference is made to the ‘arms raised’ figure and to

unusual gestures or stances in order to assist in the interpretation of this element in the Central Eastern Desert petroglyphs and the role of the petroglyphs in the cultural landscape.

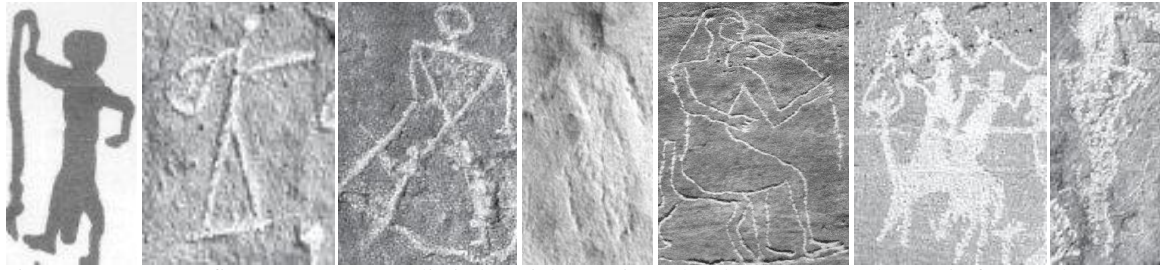


Figure 5.1. Human figure types: a) Realistic b) Stick c) Triangular d) Naqada e) Pharaonic f) Camel & Horse Rider h) Other

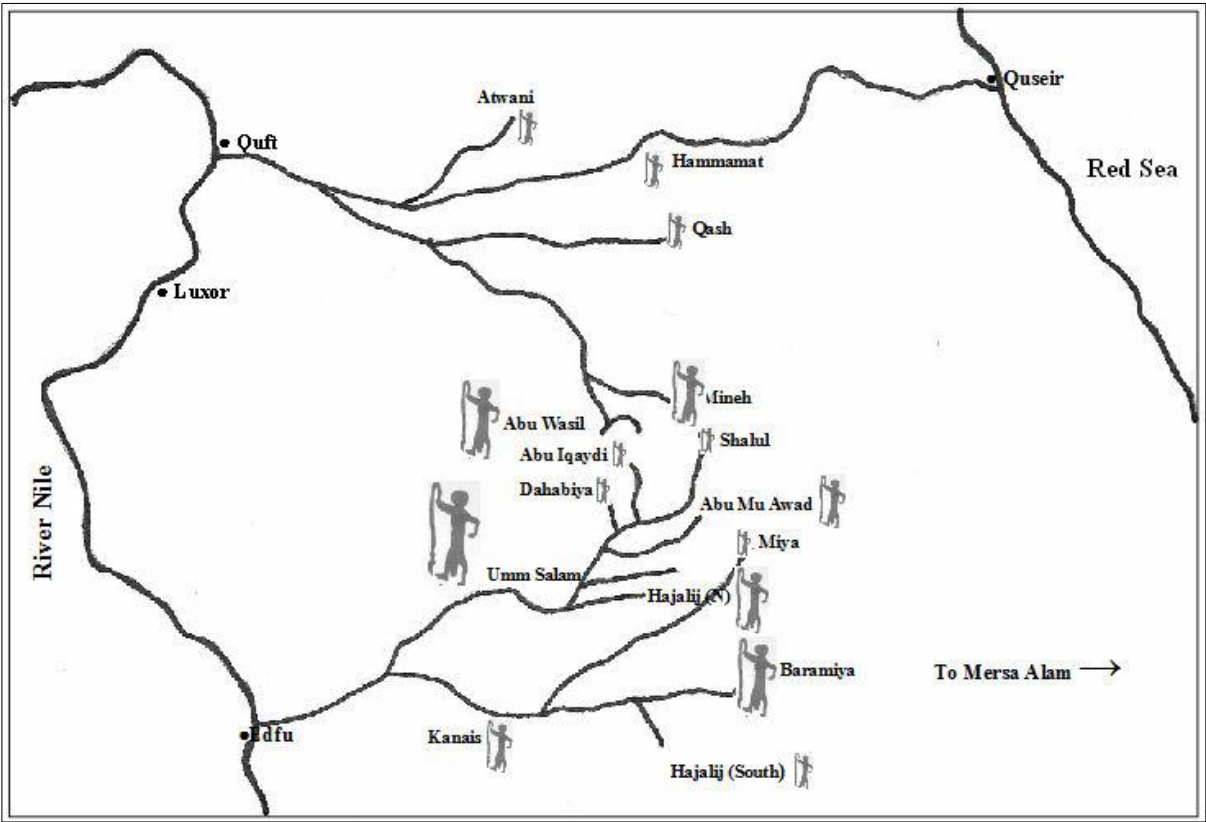
Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Figures	39	20	126	53	161	27	65	29	3	17	106	82	48	48	37	861
			151	57		52	70	40	5	37	116	113		51	44	988
Realistic	25	12	52	40	80	9	21	8	2	6	70	43	18	19	11	418 (48.5%) [42%]
Stick	4	1	26	5	37	8	17	11	0	9	22	17	12	10	6	185 (21.5%) [19%]
Triangular	0	0	5	0	2	3	9	4	0	0	2	0	4	0	0	29 (3%)
Naqada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7 (0.8)
Pharaonic	2	0	1	0	1	1	2	0	0	1	0	3	5	12	0	28 (3%)
Other	1	3	9	5	12	5	7	4	1	1	5	9	9	2	6	79 (9%) [8%]
Horse & Camel Riders	0	0	25	4	0	25	5	11	2	20	10	31	0	3	9	127 [13%]
Not	7	4	33	3	29	1	9	2	0	'several'	7	10	0	5	5	115

identified																(13%)
																[11.5%]

Table 5.2. Distribution of figure types by wadi Total: 859 without Horse & Rider figures, [986 including them]

5.2.1.2 ‘REALISTIC’ FIGURES

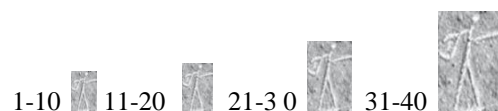
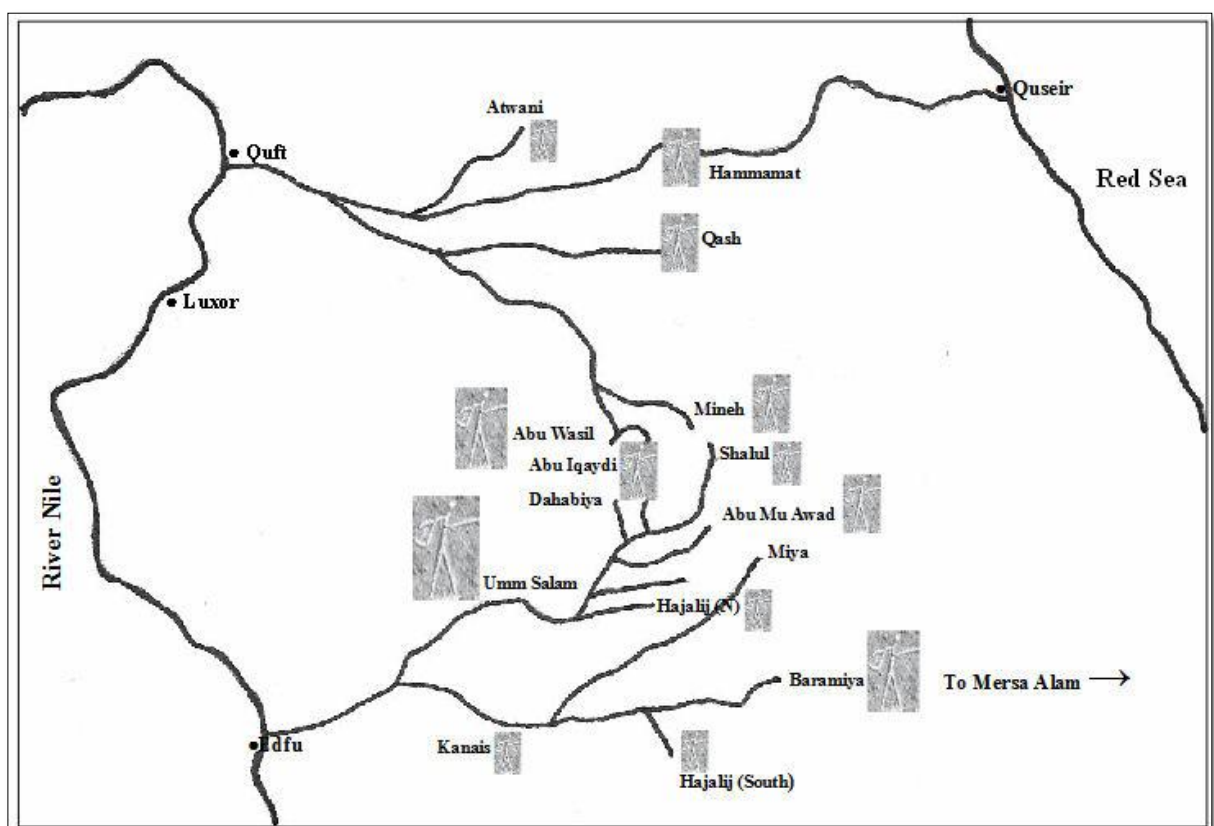
A Realistic figure (Figure 5.1a) is one which has a clearly delineated head and torso, and where all limbs are shown fully. Some Realistic images have thin bodies, but in all cases a solid human figure is portrayed. Although these could be broken down further regarding size of torso, the resulting sub-divisions would be too subjective to be meaningful. Realistic petroglyphs make up 48.5%, just less than half of the total, and are well represented in all the wadis (Map 5.2). Even though the ‘Realistic’ figures are more detailed than all but the ‘Pharaonic’ examples, the fact that that around half of the Realistic examples are thinly drawn, the lack of detail and indeed crudity of many of these Central Eastern Desert human images must be noted.



Map 2. Distribution of Realistic figures, total: 416

5.2.1.3 'STICK' FIGURES

In contrast to the Realistic examples, Stick figures are distinctively different in that they consist of simple strokes (Figure 5.1b), but also have all limbs and may hold items and/or wear decoration such as plumes. Although many Realistic human images are thinly pecked, Stick figures always consist of only one narrow line, with no attempt to fill out the depiction. They are found participating in all the activities in which the Realistic ones engage, although a much smaller proportion stand in boats. Stick figures are quite evenly distributed around the survey area with 50% in the southern and 30% in the central wadis (Map 5.3).

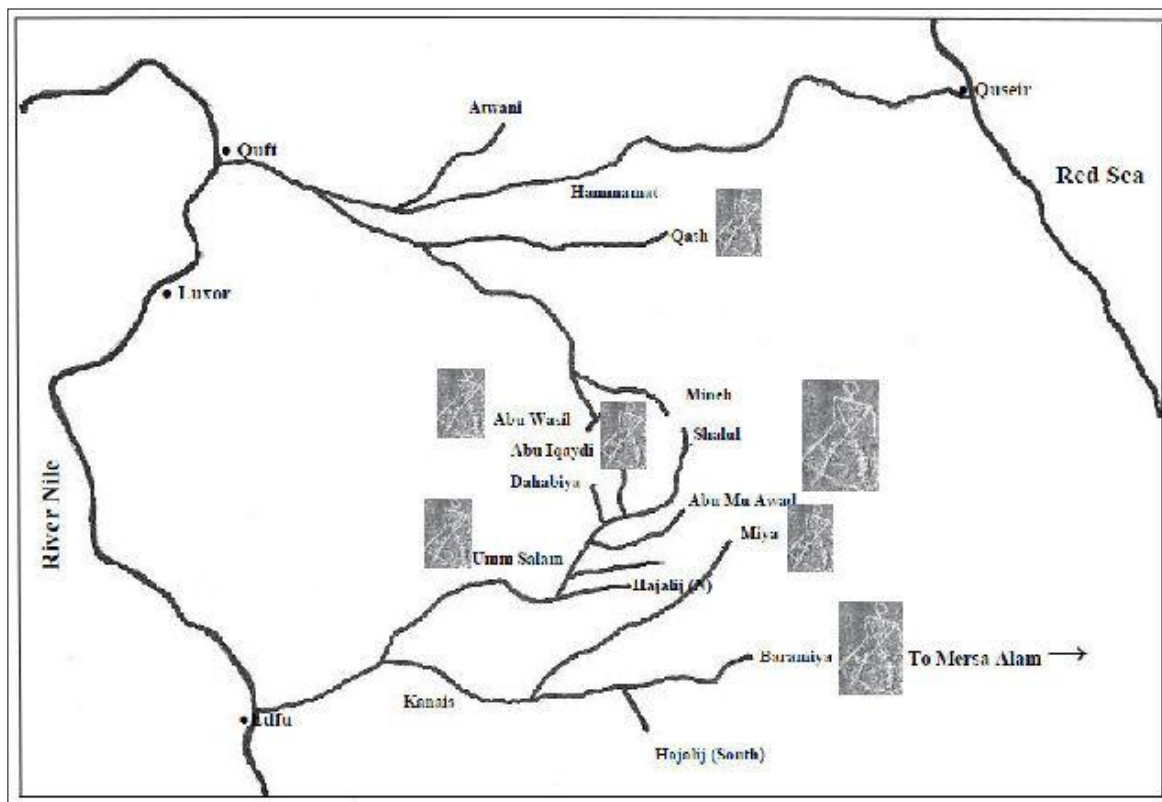


Map 5.3. Distribution of stick figures, total: 185

5.2.1.4 'TRIANGULAR' FIGURES

Triangular examples possess a torso which is shaped like a triangle (Figure 5.1c), rather than the roughly oval or rectangular body of the Realistic figures. There are only twenty-nine in

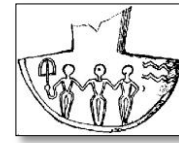
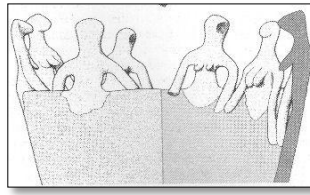
the whole survey area and thus these figures are rare (Map 5.4). Unlike the vast majority of the petroglyphs, they are usually incised rather than pecked.



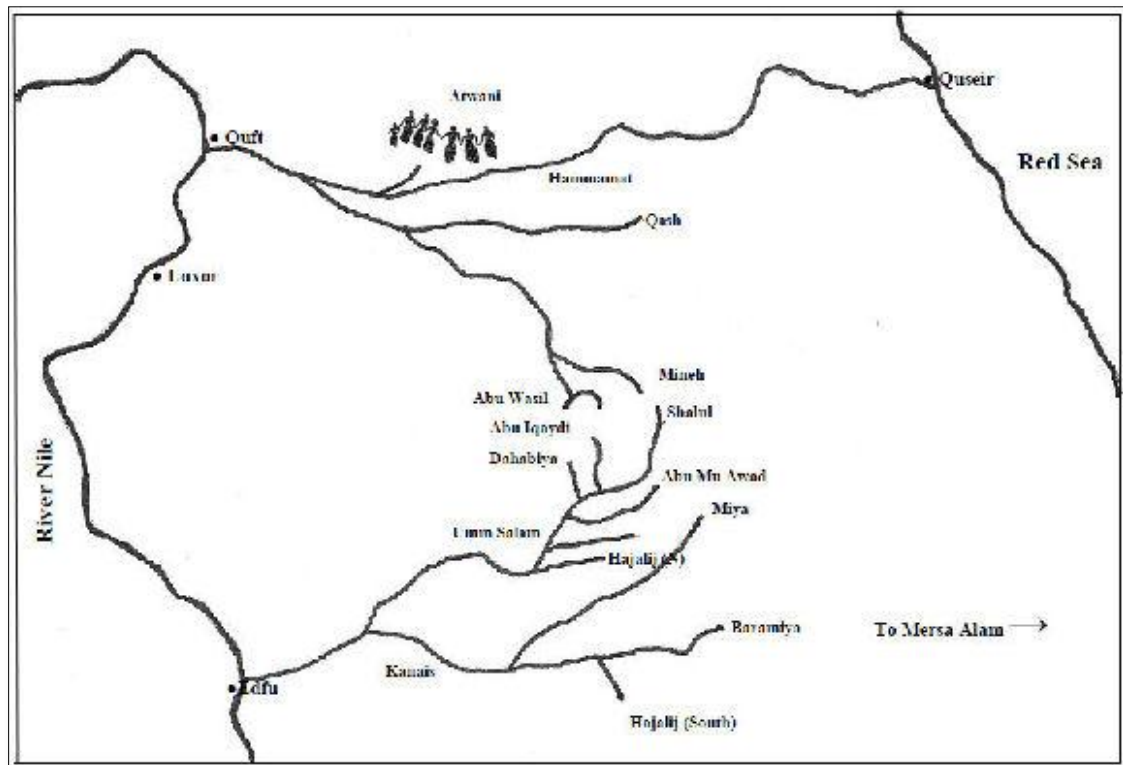
Map 5.4. Distribution of Triangular figures, total: 29

5.2.1.5 'NAQADA' FIGURES

Naqada images are those for which clear stylistic parallels exist from Nile Valley Naqada I and II artefacts (Figure 5.1d). There are only seven examples of this type in the survey area in one group from only one site (map 5): ATW-8, near to the junction between Wadis Atwani and Hammamat (Figure 5.2). This can be compared to the image on a Naqada II pot where female figures stand in a line holding hands (Figure 5.3) and on a knife handle (Figure 5.4). Less than 1% of human figures belong to this type, although two groups of 'skirted' figures are reported south of Baramiya but unfortunately not illustrated for comparison (Judd, 2009: 30).



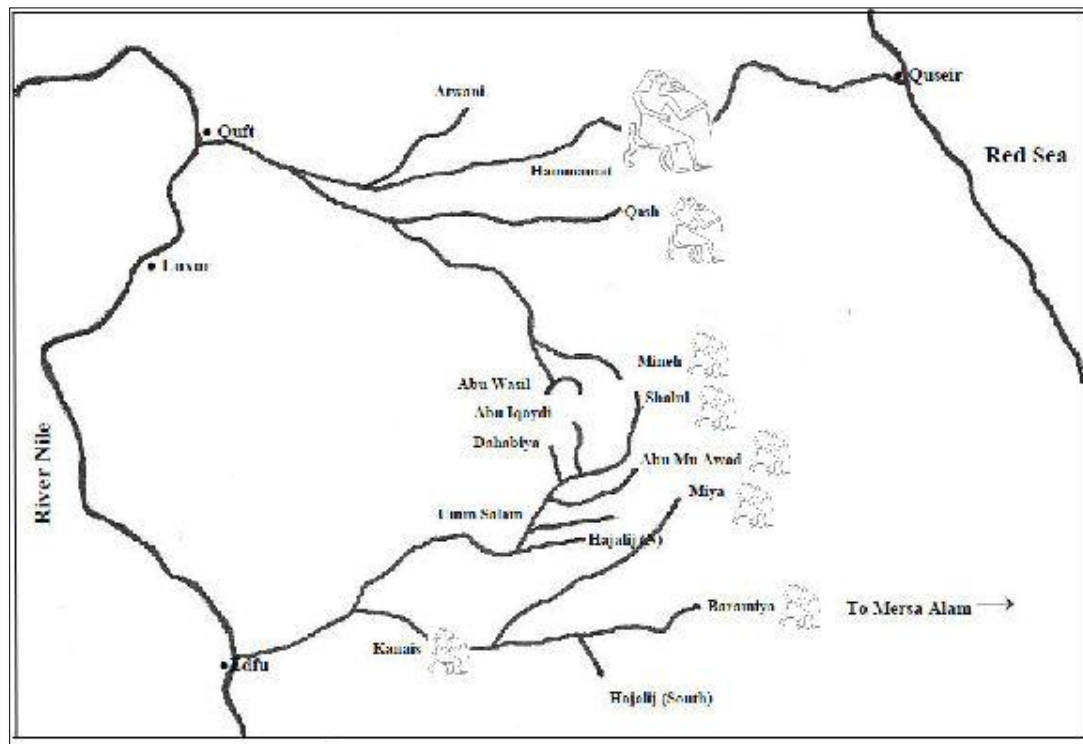
Left: Figure 5.2. Line of skirted figures holding hands, ATW-8, author's photo, Centre: Figure 5.3. Illustration of Naqada II bowl with skirted female figures holding hands, Rohl, 2000: 165, Right: Figure 5.4. Female figures holding hands on knife handle, Aksamit, 1989: 325



Map 5.5. Location of only site of ‘Naqada’ figures

5.2.1.6 ‘PHARAONIC’ FIGURES

Pharaonic figures are those also found in the dynastic record, such as an example of the god Min or a seated figure with a lotus held to its nose (Figure 5.5). They are shown in profile in, detail and with clothes carefully delineated, which is extremely uncommon for the Central Eastern Desert petroglyphs. Some are accompanied by hieroglyphs or a cartouche and are a particular feature of the north (Map 5.6).



Map 5.6. Distribution of Pharaonic figures, total: 28

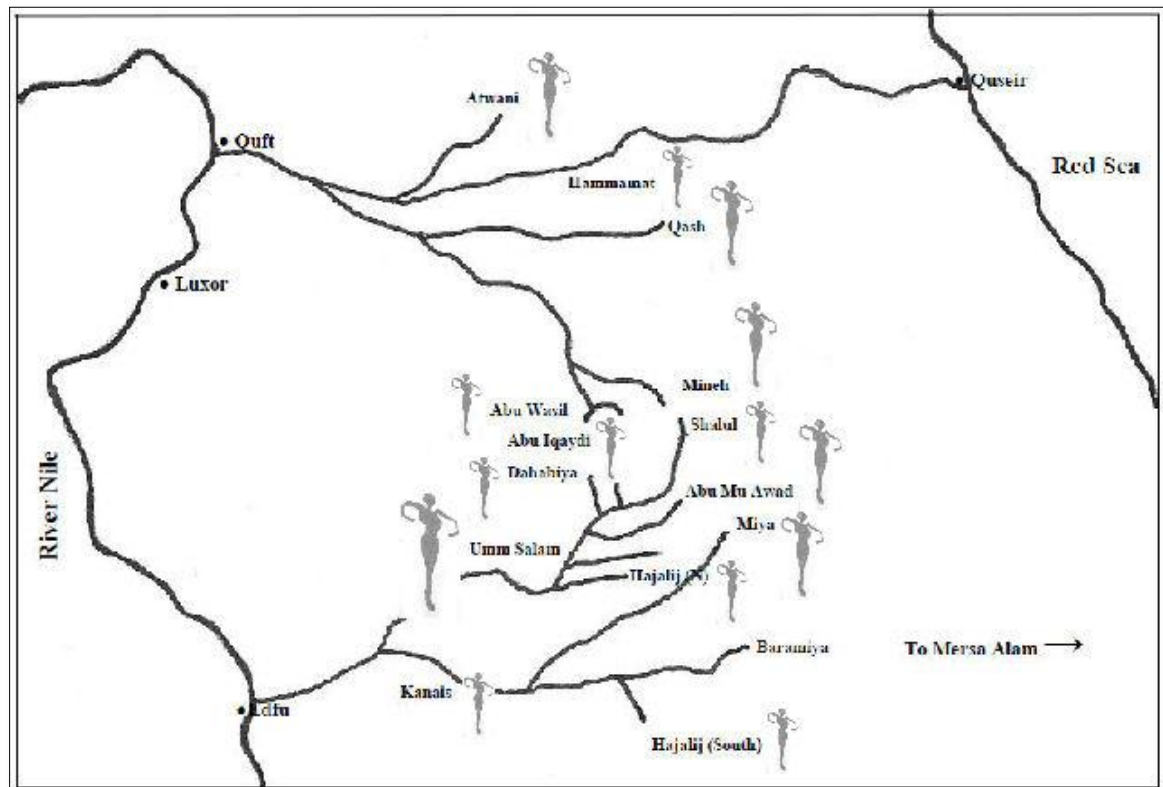


Figure 5.5. Seated pharaonic figure holding lotus to nose, HAM-12, Rohl, 2000: 133

5.2.1.7 'OTHER' FIGURES

'Other' motifs are recognisably human but may lack a limb(s) or even a head. They include figures standing in a boat where often the legs are not shown and examples such as that in Figure 5.1f where a torso lacks arms, and a few examples where the legs are fused in to one

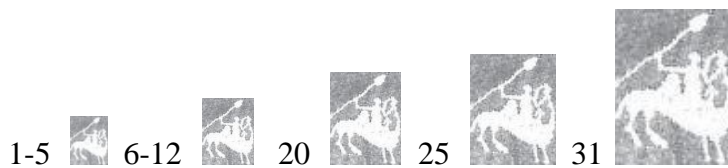
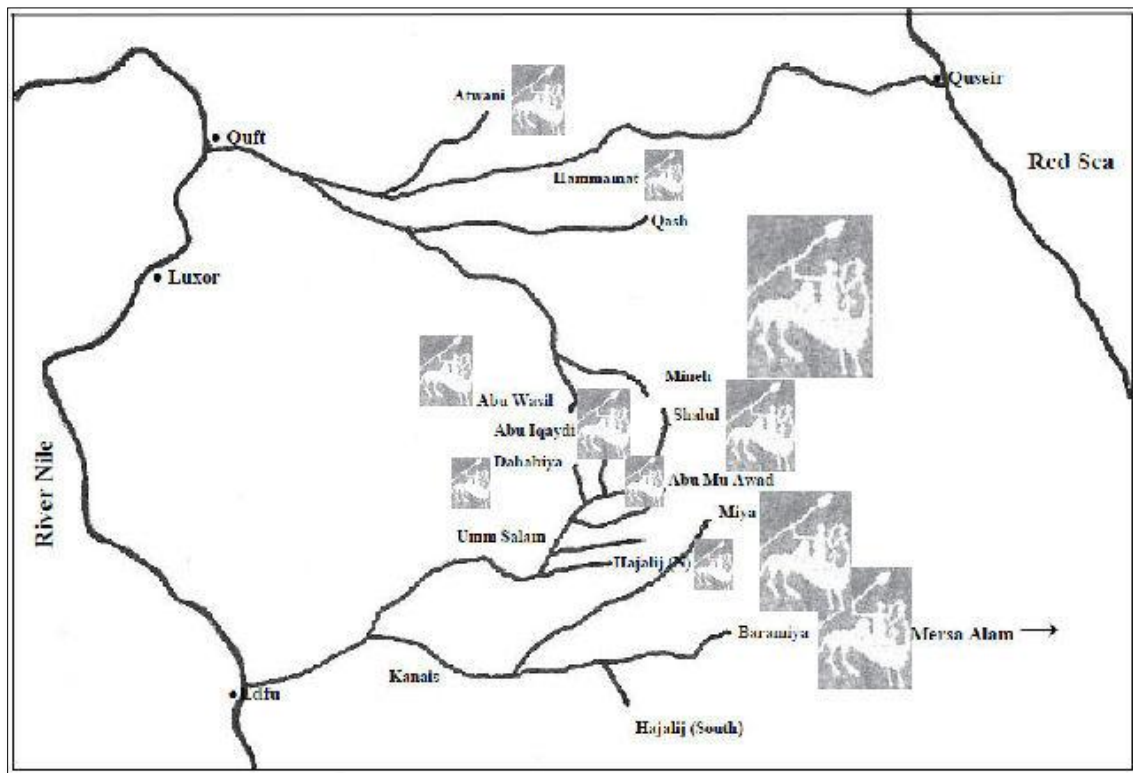
limb. They are not common, but do constitute nearly 10% of the human figures and emphasise the crudity and lack of attention to detail in many of the Central Eastern Desert human representations (Map 5.7).



Map 5.7. Distribution of Other figures

5.2.1.8 'HORSE & CAMEL RIDERS'

Many of the horse and camel petroglyphs are shown with a rider (Figure 5.1g). Some hold a weapon, usually a spear or lance (Figure 5.6). These figures usually have a much lighter patination than other petroglyphs and are clearly much later in date than most of the rest of the images in the survey area. Therefore, they are included within the overall total of 986 human figures. However, since they do date later than the predynastic and pharaonic figures 859 is retained as the number from which the ancient Egyptian examples are examined. They are unevenly distributed in the survey area (Map 5.8).



Map 5.8. Distribution of Horse & Camel riders



Figure 5.6. Example of horse & camel riders, WAS-3, Rohl, 2000: 175

5.2.1.9 'NOT ILLUSTRATED' FIGURES

Those human images 'Not Illustrated' are mentioned in the text of publications, perhaps in some detail, especially if they stand in a boat, but for which no photograph or line drawing is included in the survey reports. The highest figure of 33 in the Wadi Baramiya is due to the

particular lack of comprehensive illustration by Van Craeynest (2004) included in the M.A. dissertation.

5.3 Overview of Human Figures

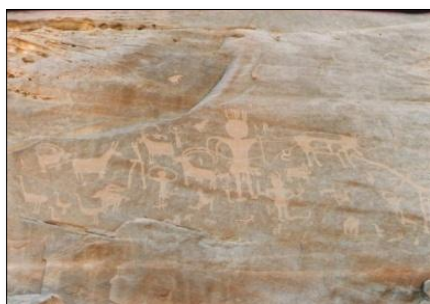
5.3.1 Distribution

With the exception of Wadi Miya, the presence of human images does not fall below 75% of sites in each wadi (Table 5.1). The low 57% figure for Wadi Miya is caused by two sites there being composed entirely of horse and camel riders who are not the focus of this study. The 859 human figures are distributed with a bias (57%) towards the southern wadis, with the central wadis (at 27.5%) being under-represented in terms of the number of figures (Table 5.1, Appendix Three & 2 above) Wadis Dahabiya (3) and Shalul (17) stand out as having few human images, although Shalul additionally possesses a considerable number of horse and camel rider figures. Regarding figures per site, Wadi Abu Iqaydi has 29 figures at 15 sites for a low average. Overall, the lowest proportion of human images is found in the core central wadis. Otherwise, the percentage of the total number of figures only reaches double figures in Wadis Baramiya (126/14.5%), Umm Salam (161/19%), and Abu Wasil (106/12%), although Wadi Mineh nearly does (82/9%).

Concerning figure types, Realistic, Other and Stick figures are spread across the wadi system proportionately to the share of sites with around 50% of their number in the south and 30% in the centre. Triangular figures are heavily (65.5%) biased towards the south in distribution, while pharaonic motifs are found significantly more (58%) in the north (Table 5.3). The seven clear Naqada figures are found only at one site in Wadi Atwani where they are depicted holding hands. Twelve (43%) of the 28 pharaonic images alone are located in the Wadi Hammamat, a direct route to the schist quarries and the Red Sea. Horse and Camel Riders are heavily concentrated in Wadis Baramiya, Miya, Shalul and Mineh and those apparently engaged in fighting are particularly located in Wadi Shalul. The northern wadis of Qash, Hammamat and Atwani have a majority of Stick, Triangular, Other and Pharaonic figures combined, while in the central and southern wadis Realistic figures total more than all the others combined, if those images not illustrated are excluded. Overall, Realistic figures outnumber Stick figures by approximately 2:1, Other figures by 5:1 and Triangular motifs by more than 12:1. Nevertheless, Stick figures constitute 21.5% of all human motifs and 25% of those illustrated. Triangular motifs are distinctive but rare. They are invariable shown in

outline, a different style from the overwhelming majority of Central Eastern Desert human images and are most common in the Wadi Abu Mu Awad.

It is difficult to break down even the ‘Realistic’ heading further because of the lack of distinguishing features. One example where this is possible is SAL-35, which has a rare detailed depiction of a loin cloth or animal skin worn at the waist. This figure additionally controls a bovid, which is a rare combination. Loin cloths may also be present at MUA-16, MIY-1, WAS-7 and WAS-19. The large multi-plumed central figure at SAL-35 (Figure 5.7) stands out as being scaled much larger than the other human motifs in the group. This is an extremely rare occurrence seen elsewhere only at WAS-9 and WAS-10/DR-2 (Figure 8). This often lack of detail means that different styles are difficult to identify, and it is hard to determine whether even Realistic figures at different sites were made by the same petroglyph creators. The group of hunters (see Figure 5.1a), usually having a ‘tail,’ carrying a bow and with one hand on the hip engaged in hunting can be traced through Wadi Baramiya, at MIY-1 and down into wadi Midriq in the Kom Ombo watershed. But this ability to track one style and what may be one group is rare.



Left: Figure 5.7. Large-scaled image at SAL-35, author’s photo, Right: Figure 5.8. Scaled figures in ‘chieftains’ boat WAS-10/DR-2, author’s photo

5.3.2 Dating

Human occupation of the Upper Egyptian Nile Valley and its associated desert areas has been significant since the Badarian period (ca. 4400-3900 BCE). Therefore petroglyphs could potentially range in date over nearly six and a half thousand years, although the most favourable period for human occupation has been a third of that. After approximately 2300 BCE the Central Eastern Desert reached conditions seen there today, with only an extremely small number of nomadic inhabitants in addition to a few journeys of settled people engaged in mining and quarrying. Hunting, especially of ibex and antelope, which can still be found in the Eastern Desert, has been a major occupation down the millennia. Human figures and

animals together cannot be dated by comparative patination unless there is a motif present from a Nile Valley culture. This means that although 73% of sites have some kind of dateable evidence, a majority of the individual petroglyphs cannot be dated. This is particularly true for the human images. Moreover, there are no figurative examples on pottery from the Badarian culture, only a few figurines, so any human image preceding Naqada I (ca. 3900-3650 BCE) cannot readily be identified.

Dating is problematic, since apart from clearly pharaonic depictions, the predynastic 'arms raised' figures and the seven in Naqada style, others must generally be dated either by reference to the kind of boat they stand in or with which they are closely associated.

Regarding Triangular figures, at MUA-10 there are two, one of which appears to be a stylised figure of the god Min. This wadi is notable for its pharaonic boats and inscriptions, thus Triangular figures may generally be pharaonic too. A triangular-torsoed figure at BAR-1 is in context with pharaonic motifs. At IQA-10 the four Triangular motifs in this wadi all stand in two centrally-masted boats. Greek lettering with the same patination suggests that these motifs are late. In the Wadi Miya at MIY-1 a triangular figure leads a camel, while two figures at MIY-4 two triangular motifs each lead a bovid with horns pointing sharply outward, rather than the lyre shape common among predynastic cattle. This suggests that many of this type are late.

By stylistic comparison and by association 54 human figures can be assigned a pharaonic or later date, including the Pharaonic style images. 249 can be assigned a predynastic date. Thus only 303 figures, (35%) can be dated with confidence, excluding the Horse & Camel Riders; although 82% of those which can be dated are predynastic (Table 5.3, Appendix Three). Realistic figures make up two-thirds of those identified and overwhelmingly date from the Predynastic. By association, the small number of Triangular figures found are equally of predynastic and pharaonic or later date.

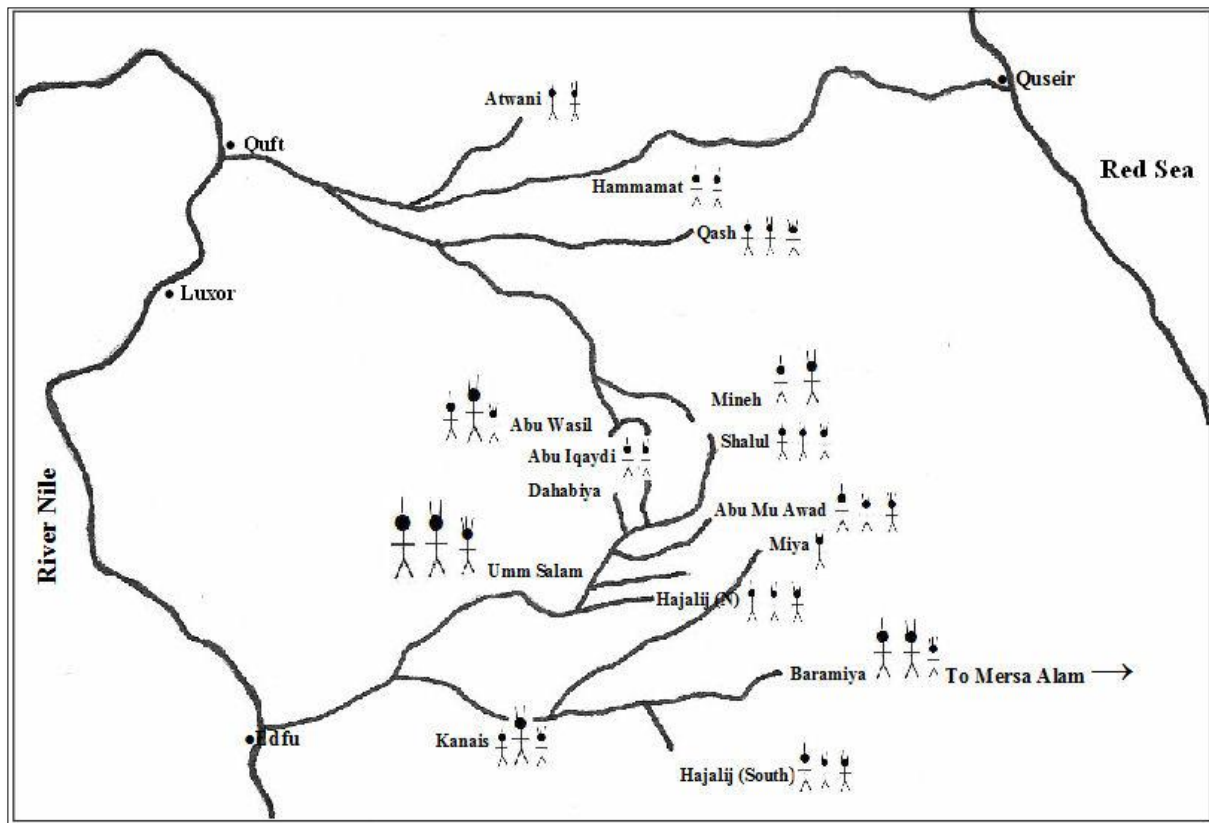
5.4 Feather Adornment

Feathers are the most common feature added to the basic body shape. Both Rohl (2000) and Wilkinson (2003) maintained that plumes not only represented status, but that divinity and twin plumes were a precursor of the double-plumes worn by gods and goddesses in the pharaonic era. They are examined here to determine if they may indicate status or are associated with hunting, since the latter is such a feature of the Central Eastern Desert petroglyphs.

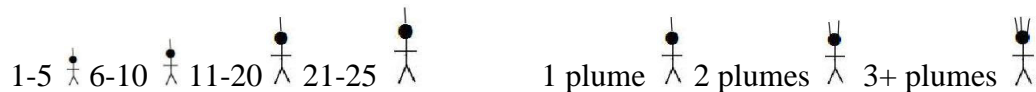
5.4.1 Distribution

Feathers are worn by 209, just under a quarter of all figures (Appendix Three, Table 5.4). 100 (48%) of plumed figures have two feathers, 79 (38%) possess one feather, and thirty (14%) have three or more. Thus, wearers of two plumes constitute a plurality of plume wearers. There are concentrations of multi-plumed figures in Wadis Umm Salam in the south and Abu Wasil in the (northern) central area, while there is only one example in the north, at QAS-3, with none in Wadis Hammamat and Atwani (Map 5.9 below & Appendix Three, Table 5.4). While a reasonable assumption might be that plumes are related to hunting activity, not every figure in a group engaged in hunting wears them. This occurs at only four locations: SAL-20, SAL-44, WAS-21 and SHA-7. There are numerous groups of hunters, notably the large ones comprising respectively 15 and 7 figures at HAJ (N)-3 and BAR-10, in which none of them display plumes. 49 plumed figures are engaged in hunting (21%) out of 205 hunters, while a larger number, 63 (26.5%), stand in boats out of a total of 237 who do so. Thus, over half of feathered figures fall into these two categories. Of the 164 boats which are occupied by human figures (rather than ‘crew’ shown by a simple stroke) 57 (35%) have plumed figures in them. Therefore, plumes are a popular adornment, but not a necessity either for hunting or travel in a boat.

Figures wearing plumes are concentrated at some sites. For example, at KAN-2 four of the five figures associated with the ‘golf club’ boat have double plumes. At BAR-9 the arm-in-arm couple, figure controlling a crocodile, and an ‘arms raised’ figure in a boat all have plumes. The hunting group at SAL-20, which includes an ‘arms raised’ figure, all wear plumes (see Figure 5.2); multiple ones with the exception of the single-plumed ‘arms raised’ figure. At SAL-35 three of the five figures, including one of the three ‘arms raised’ figures present, have multiple plumes and another ‘arms raised’ figure has one. Five hunters with bows and three ‘arms raised’ figures at HAJ(S)-1 all have a single or double plume. Eight figures in boats at WAS-10 possess double plumes, including four out of five in the ‘chieftains’ boat on the main face, while at WAS-16 four multiple-plumed figures are present. Sites on both sides of the wadi near WAS-10 have plumed figures at six nearby locations. This suggests that plumes have special significance at a certain number of major sites.



Map 5.9. Figure types with 1, 2, & 3+ plume(s) Total: 210



5.4.2 Dating

Plumed figures are mostly found in the southern wadis and at sites dated to the Predynastic (see Chapter Seven). They are especially prevalent in the heavily early Wadis Baramiya, Hajaliy (S), and Umm Salam. But they also feature at predynastic sites in Abu Wasil, and this north-central wadi sees a concentration of feathered figures. There are comparatively few examples in Wadi Hammamat where there are a number of pharaonic figures, only one of which has double plumes. In Wadi Atwani again plumed figures are present entirely at early sites in association with predynastic boats. In the core central Wadis Iqaydi and Shalul plumed figures are rare. However, plumes do not always indicate an early date. At IQA-10 comparison to Greek lettering shows that one plumed figure in a boat is probably Greco Roman. The plumes also have bulbous ends, a feature never seen on predynastic figures (Figure 5.9).

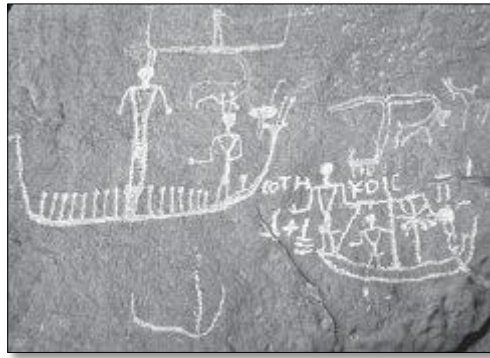


Figure 5.9. Late plumed figures in boat, IQA-10, Morrow & Morrow, 2002: 143

5.4.3 Discussion

Plumed figures are much less common in the northern wadis, probably because hunting figures are less common there too. There are only 16 out of 209 (8%), compared to 68 (33%) in the central area, and a hundred and eighteen (58%) in the southern wadis. There are no groups of feathered figures at all in the northern Wadis Atwani, Hammamat and Qash. Examples here are always isolated. There is one set of three-plumed motifs standing in a boat in the north central Wadi Mineh. This contrasts with their prevalence in the Wadi Abu Wasil. More than a quarter of plumed figures are found in Wadi Umm Salam alone and this wadi has a large number of hunting figures chasing prey with dogs. This suggests that separate groups who frequented particular locations and created petroglyphs there attached special importance to the wearing and representation of plumes, in particular while engaged in hunting. An even large number of feathered figures stand in boats. Given that most hunting figures and those standing in a vessel do not possess plumes we might conclude that the wearing of feathers represents an indication of status. However, it must be remembered that that boats are also commonly associated with hunting. Plumed figures are more likely to be more carefully depicted as two-thirds are of the Realistic type compared to under half of all human figures (see Table 5.5, Appendix Three).

5.5 Weapons & Staffs

5.5.1 Distribution

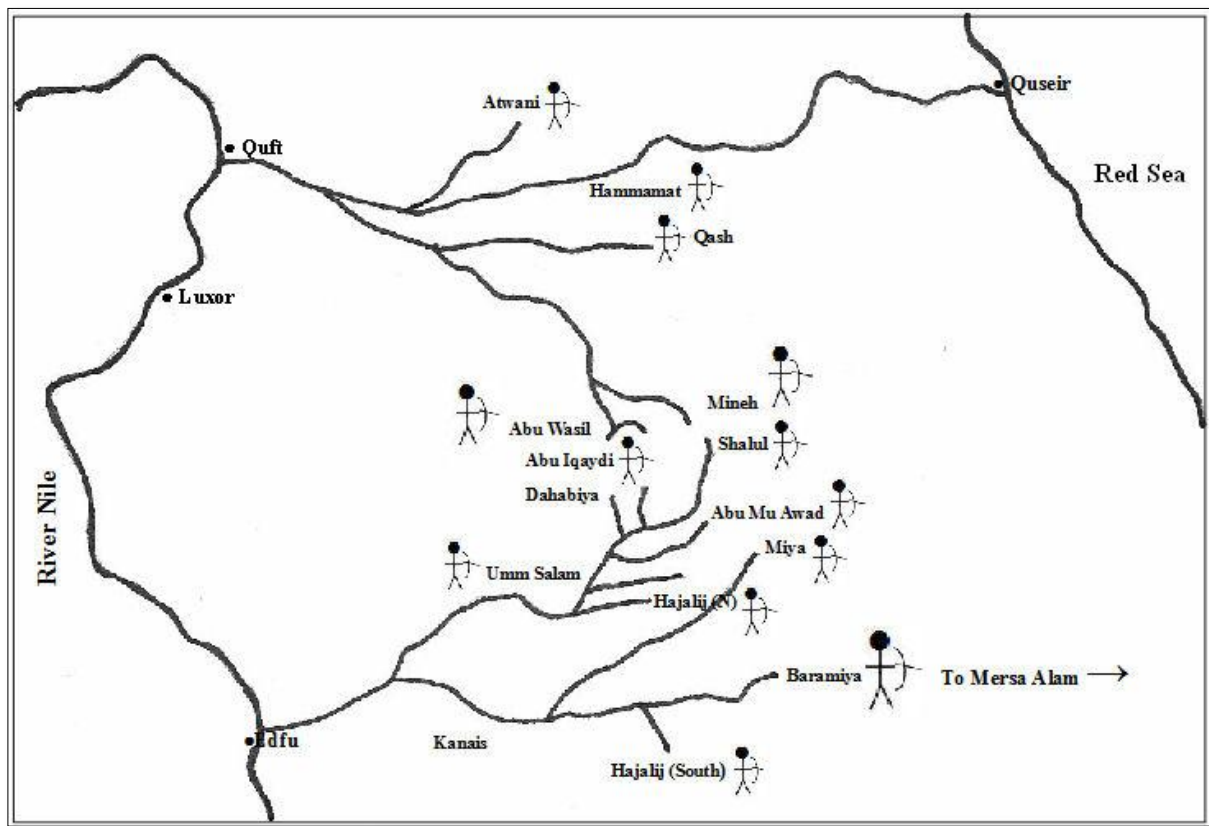
Weapons include bows, throw-sticks, swords and spears. In particular, bows are considered here to determine how significant the use of one is when engaged in hunting as opposed to the chase with dogs alone, and to see if possession of a bow may be a sign of status. The bow is clearly the hunting weapon of choice as 82 figures, 34% of those engaged in hunting, carry

one (see Table 5.6, Appendix Three) compared to only six throw-sticks (four by figures in boats). Although the bow was the weapon of choice, only 10% of all human motifs have a bow and in any wadi the percentage never rises above 20%, except in Hajalij (S) and Shalul where there are few figures (Map 10). Wadi Umm Salam, with the largest number of sites and human motifs, stands out as having a paucity of bow-carrying figures: 5 (9%), although 55 (34%) are engaged in hunting. Apart from Wadis Kanais and Dahabiya where no hunting figures carry bows, this is the lowest number compared to any other wadi. In other wadis with large numbers of sites such as Abu Wasil (43%) and Mineh (59%) the percentage of figures with bows against the total engaged in hunting is very much higher. In contrast to the prevalence of bows, only six figures hold a throw-stick. Half of these are in boats in Wadi Abu Wasil.

Apart from the bow, weapons are very common only when wielded by horse and camel riders. This is completely different from the earlier material where there not a single scene of human conflict shown.¹¹ un-mounted figures carry sword and shield and all are at sites in close association with rider images. A spear carried by a figure on foot is also rarely in evidence, there being only five examples. Four of these are in the central wadis where there are many horse and camel rider fighting figures. A figure stabbing an ibex with a spear at IQA-13 is unique.

A staff held in the hand is also noted here. Only 22 human motifs hold a staff, just one of whom is standing in a boat. The combination of staff plus boat may indicate status in this single case. A staff is useful as a walking aid and to hook down branches so that domestic animals can feed, but is a minor feature of the Central Eastern Desert petroglyphs. Examples are isolated; Umm Salam has eight examples, Mineh five and no other more than two (Table 5.8, Appendix Three) and there are none of all figures in a group carrying one. Only 21 figures hold a staff. Therefore, overall this hand-held implement is rare, making up just 4% of features.

Regarding figure types with bows, the vast majority (81%) are Realistic (Table 7, Appendix Three), while at 13% the proportion of Stick figures is half that in the petroglyphs as a whole. At 4% there are very few 'Other' figures among those with a bow. More care was taken by the petroglyph creators the more details the figure has, and this is a pattern for figures in the Central Eastern Desert petroglyphs as a whole. Of the very small number of figures carrying a throw-stick, 5 out of the 6 are Realistic.



Map 5.10. Distribution of figures with bows

5.5.2 Dating

Figures with bows are concentrated in association with predynastic images and are rare in those wadis such as Abu Mu Awad, Iqaydi, Shalul and Hammamat which are mainly late in date. They are common in Wadis Baramiya, Mineh and Abu Wasil at early sites. In the latter they are particularly associated with, and indeed stand in, predynastic vessels. However, the rarity of bow-carrying hunters in Umm Salam demonstrates that not all predynastic hunting groups are likely to be equipped with a missile weapon. Swords and spears are invariably held by the horse and camel riders and associated figures.

5.5.3 Discussion

Figures with bows are overwhelmingly actively engaged in hunting or associated with dogs or other animals. It is interesting that Wadi Umm Salam departs from the usual pattern of

predynastic hunters using a bow. This may be accounted for by Umm Salam having the largest number of dog images: 96 (nearly a third-31% of the total of 317). This suggests a preference among the petroglyph creators in this wadi for running down prey with dogs rather than shooting at it.

Figures in boats are often referred to in the EDS and RATS survey publications as ‘chieftains.’ Wadi Abu Wasil has the only examples of figures in boats portrayed as holding out a bow in front of the chest, two at WAS-10/DR-2 (see Figure 5.8) and one at WAS-25/SH-1 (Figure 5.10). All three figures also have double plumes, although the WAS-10 examples are extremely long and look almost tubular. These Realistic figures stand out in that they are well delineated and a tunic is indicated, which is a rare feature. This wadi also has three of the five examples in the Central Eastern Desert of figures, also plumed, standing in boats and of holding a throw-stick. In addition, DR-2/WAS-10 has the only example of a figure with a bow slaughtering a tethered bovid (Figure 5.11), above the image of the figures with bows in a boat. Apart from a controlled bovid and the slaughter scene, there is an ostrich being chased by a dog, but no humans are involved in hunting on this face. There are no animal petroglyphs at the associated site SH-1/WAS-26. Therefore, this unique way of holding a bow may not be connected with utilitarian use in hunting. Together with the possession of a bow and its holding in a special way suggests that in this case these are authority figures. In total, only seven figures stand in a boat holding a bow, three of them in the Wadi Abu Wasil and the only example where there are two figures with bows. Baramiya, Umm Salam, Mineh and Qash each have one figure with a bow in a boat. Therefore, although the unique portrayals in Wadi Abu Wasil, combined with scaling in the figures, may indicate status, the general use of the bow is as a hunting weapon.



Left: Figure 5.10. Image with bow SH-1/WAS-25, Rohl, 2000: 121, Right: Figure 5.11. Bovid slaughter, WAS-10/DR-2, author's photo

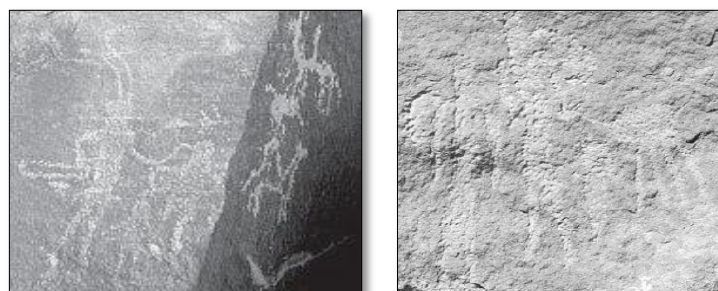
5.6 Gender and Age

5.6.1 Distribution

In dealing with gender, assigning it to the human petroglyphs is problematic. Apart from one half of a copulating scene at Hajalij (N)-3, the figure in a boat noted as a ‘dancing goddess’ at WAS-10 (Figure 5.12) and one each in two, possibly three ‘family’ groups at KAN-3, SAL-25 and MIN-7 (Figure 5.13) and the WAS-10/DR-2 boat figures (see Figure 5.8) there are no other examples of human motifs which are open to identification as female. Moreover, given that none of the female ‘arms raised’ figures on D-Ware are shown with plumes, even the WAS-10 example may in fact be male. The pecking rather than incising method used to create the figures militates against the showing of gender, and there is only possibly the ‘dancing goddess’ example from WAS-10 which shows the tapered body form evident on D-Ware pottery. The three ‘family’ groups at KAN-3 (Figure 5.14), SAL-25 and MIN-7, depicted in different styles, each consist of three figures: one large, one medium and one small, which may represent parents and a child. It is possible that the two smaller figures in the ‘chieftains’ boat at WAS-10 are also children as they are significantly smaller than the three other figures. Overall, only 68 (8%) of the petroglyphs have a clear male marker. However, the usual uniformity of height where groups of figures are depicted, plus the carrying of weapons and widespread engagement in hunting and the lack of female body shapes suggests that the overwhelming proportion of human motifs in the Central Eastern Desert are male.



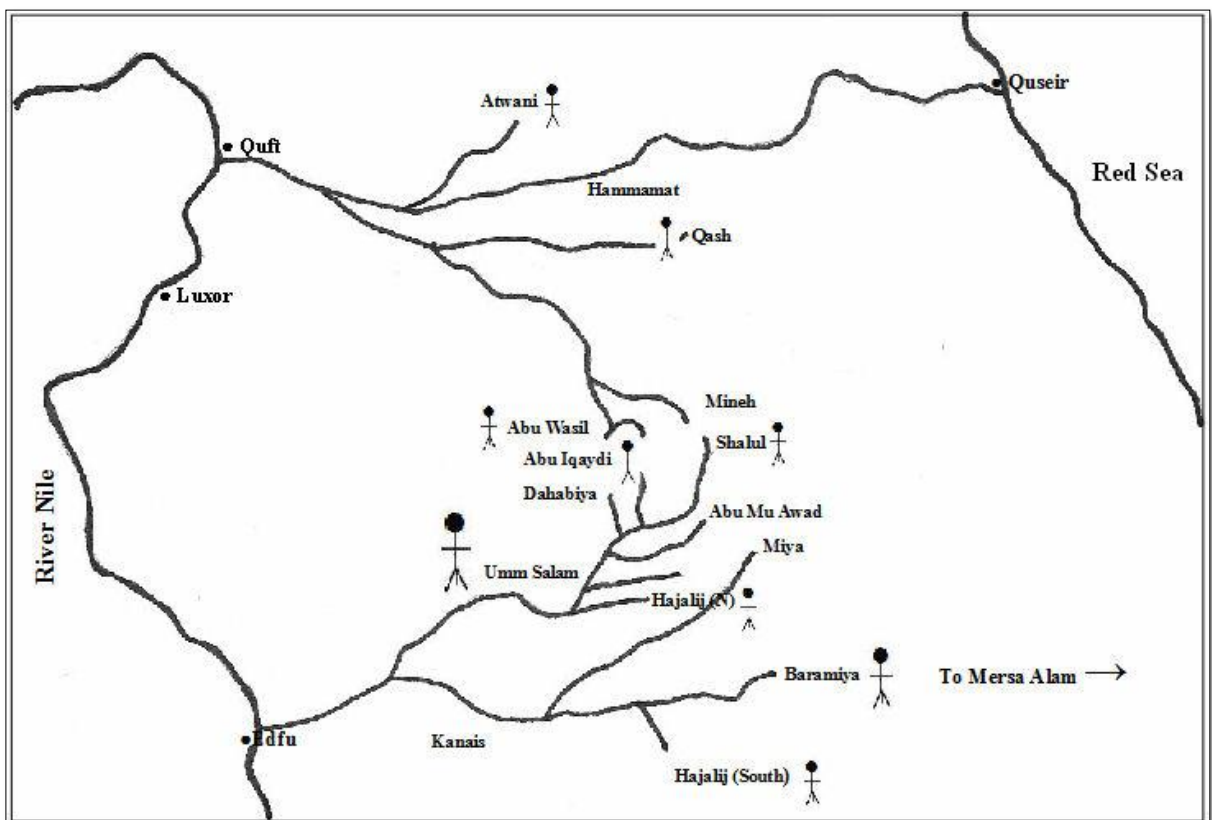
Figure 5.12. Figure in boat often referred to as a ‘dancing goddess,’ WAS-10, author’s photo



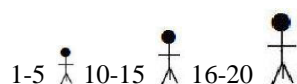
‘Family’ groups, Left: Figure 5.13. MIN-5, Morrow & Morrow, 2002: 185, Right: Figure 5.14. KAN-4, Rohl, 2000: 25

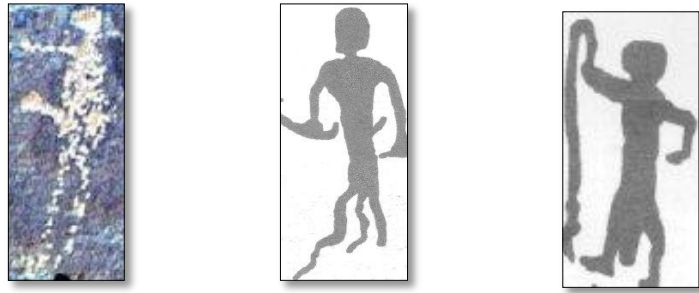
5.6.2 Distribution

It has already been noted that determining gender is problematic (see Chapter 2, page 20). Just 17 (2%) of the human motifs are shown with a phallus or what may be a penis sheath. These are a notable feature predominantly at HAJ (N)-3 with all six examples in the wadi at this one site (Figure 5.15). Just three have a recognisable ‘tail’ Type I (Figure 5.16). This is probably due to very few of the figures being shown in profile. A further 48 have a tail Type II (Map 5.11); that is, a vertical line hanging between the legs (Figure 5.17). This could represent an animal tail, or it could be intended to be a phallus but the figure is not in profile. At BAR-10 7 hunting figures possess this feature. On one of them the line is short, but the others reach almost to the ground. Figures wearing a tail are a particular feature of the Wadis Baramiya and Umm Salam as 12 and 17 examples are found there, whereas in all other wadis the amount only reaches maximum of 5.



Map 5.11. Distribution of figures with Tail Type II





Left: Figure 5.15. Human figure with phallus, HAJ-3, Morrow & Morrow, 2002: 243, Centre: Figure 5.16. Human figure with 'tail' Type I, Rohl, 2000: 123, Right: Figure 5.17. Human figure with 'tail' Type II, Rohl, 2000: 46

5.6.3 Dating

Practically all the figures with a phallus or 'tail,' apart from those which appear to be of the god Min are engaged in hunting. These figures have previously been overwhelmingly assigned a predynastic date. Indeed, with only one exception, all figures either with a phallus or both types of tail date from the Predynastic when in association with dateable comparisons. When not in such an association dating is impossible, since hunting has been practised in the Central Eastern Desert over the millennia and still is today.

5.6.4 Discussion

Since the 'tails' are seen on hunting figures, it is likely that they are worn by these hunters as a means of magically gaining the strength and speed of the animal from which they were taken. They are a minor of hunting figures overall, but are most popular in Wadi Umm Salam. This wadi has a low proportion of hunters with bows, but by far the highest number of dogs. Hunters in this wadi therefore needed the speed of a pursuit animal to assist them in running down their prey. Wadi Baramiya has the second highest number of 'tailed' figures and the second highest percentage of figures engaged in hunting after Wadi Umm Salam (Table 5.11, Appendix Three). We might expect that Wadis Abu Wasil and Mineh in the north-central area would also have considerable numbers of figures with tails, as they have significant numbers of figures engaged in hunting. This is not the case, as Abu Wasil has few and Mineh none. Thus use of a 'tail' is heavily associated with the southern wadis. People in this area were much more likely to believe one would be efficacious. However, tail wearers constituted a separate and minority group as most hunters (80%) did not use a 'tail.'

5.7 Animal ‘Control’

The term ‘control’ rather than ‘lasso’ or ‘harpoon’ is used here as many portrayals of these activities take place in complicated, ‘Integrated’ scenes. These often show unrealistic combinations of hunting and boats, and a mix desert of animals the meaning of which will be pursued in Chapter Eight.

5.7.1 Distribution

There are 74 (8.5%) human images engaged in control (Table 5.9, Appendix Three) of an animal either by leash, lasso or harpoon. There are four instances holding by the horns: a unique bovid held by the tail at MIY-5 and another unique representation of a figure holding a bovid by the horn at IQA-6, in addition to two cases ibex held by the horns. 35 sites (13%) involving 45 figures (5%; 61% of controlling figures) have control of a bovid. With two exceptions the method used is a lasso or leash to one of the horns. In the case of 12 figures engaged in controlling crocodile and hippopotamus, harpooning is probably involved. Five of the hippo hunters are present at QAS-3 engaged with two animals in the same scene. Further examples occur at BAR-17 (involving three figures), at HAJ (N)-9 where two figures are involved and another at SAL-32 where a small stick figure holds the ends of two wavy lines leading to the head of a hippopotamus. A crocodile hunting scene occurs at only two sites, HAJ(S)-1 and BAR-9. Since there are 29 hippopotamus and 31 ‘crocodile’ images in the corpus, control of these animals is a minor activity.

Other animal control scenes are problematic. Two ‘giraffe’ are recorded in a ‘master of the animals’ scene at SHA-11 (Figure 5.18) where a human figure holds two, one each side of him. However, these ‘giraffe’ are very small and are unlikely to be that animal. Identification of what they are is difficult. Also in Wadi Shalul is the only example of a dog on a leash (SHA-1). IQA-1 has two figures each in a ‘master of animals’ pose with two elongated animals (Figure 5.19). The latter cannot be identified. They could even be roughly drawn dogs. Another example of where roughly drawn images make identification problematic can be seen at SAL-5 where another unique depiction has two figures in separate boats controlling an almost headless animal outside of each vessel (Figure 5.20). These may be in fact be hippopotami and represent the harpooning of two animals in the water. They can be compared to a scene in the Wadi Midriq (see Figure 5.31). However, in this case an ‘arms’ raised figure is present and a crewman in the boat is hauling on the line attached to a clearly defined hippopotamus.



Left: Figure 5.18. 'Master of animals,' SHA-1, Morrow & Morrow, 2002: 131, Centre: Figure 5.19. 'Master of animals,' IQA-1, Morrow & Morrow, 2002: 136, Right: Figure 5.20. 'Hippo' hunt from boats, SAL-5, author's photo

Headless quadrupeds on a leash are also present at KAN-4 (see Figure 5.17) and MUA-6, the former part of a rare family group of figures. Additionally, three ostriches, two of which are tethered are shown being slaughtered by bow and arrow wielding hunters in the Central Eastern Desert rock-art, at MIN-20/JAW-1, WAS-10/DR-2 and SAL-15. There are also two examples of a person grasping an ibex by the horns at MIY-5 (Figure 5.21) and IQA-7. This writer has seen people getting close enough to touch an ibex' horns, if not to grasp hold of them. So these probably represent actual events, perhaps drawn by the hunter involved who was proud of his achievement.

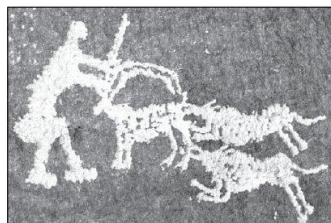


Figure 5.21. Human figure grasping ibex by horns, Morrow & Morrow, 2002: 166

5.7.2 Dating

In the central Wadis all of the examples of animal 'control' whether bovids or other animals, are at sites which cannot be dated, or are pharaonic or later according to dateable images present there. This is also the case in Abu Mu Awad. In the southern wadis Baramiya and Umm Salam, and the north-central Wadis Mineh and Abu Wasil these scenes are overwhelmingly predynastic where dateable. However, a third of all the examples of animal control cannot be dated because they stand apart from any dateable context. There is only one undateable example in the northern Wadi Hammamat, while those in Wadis Qash and Atwani are predynastic where a date can be assigned.

5.7.3 Discussion

The small number of examples of animal, other than cattle, control and their disparate nature mostly suggests the recording of individual events which happened in the desert. There are only two so-called ‘master of animals’ scenes and this identification probably results from the Egyptological background of the publication authors. They appear to be rough representations of ordinary activities dealing with animals rather than showing ‘ritualistic’ mastery of animals or untamed wild forces. The small number of cattle control depictions and the lack of large herders and groups of herders suggests that the animals are wild and that hunting rather than herding is depicted. Wadis Baramiya and Umm Salam have twice as many depictions of animal control as any other wadi, while Wadis Abu Mu Awad, Abu Wasil and Qash are the only other wadis where ‘control’ depictions reach ten percent of the total or more (Appendix Three, Table 5.10). Wadi Qash stands out for its hippopotamus control/hunting scene which involves at least five human figures-the largest group in a ‘control’ scene. It is notable that there are crocodile and hippopotamus control/hunting scenes in the desert where they would not have occurred in real life, but not in the Nile Valley where they would.

5.8 Hunting

The hunt is clearly a major activity in the Central Eastern Desert petroglyphs, as 256 figures (29.5%) at 106 sites (42.5%) are engaged in hunting (Table 5.11, Appendix Three). This is defined as where a figure is accompanied by a dog, has a bow and/or is in close association with animals, or stands among animals. Interestingly, at 27 additional sites (11%) dogs are shown chasing down prey but no human hunters are indicated. Thus some form of hunting is indicated at 133 sites (53.5%) in the Central Eastern Desert. Adding those involved in the ‘control’ of bovids and other animals, since most of these are likely to be hunting (the KAN-4 family group is probably an exception), there are 292 (36%) human figures engaged in hunting.

5.8.1 Distribution

Some form of hunting is indicated at 133 sites (53.5%) in the Central Eastern Desert, but reported hunting images only reach double figures in 7 of the 15 wadis. Wadis Umm Salam has the most figures: 55. However, with 46 sites the distribution is only just over one such figure per site on average. Hajalij (N) stands out as having 26 hunting figures at only nine sites and unusually more figures engaged in hunting than standing in boats; in a ratio of

nearly 2:1. Hajalij (S) also has more hunters than figures in boats, but has only two sites. Wadis Kanais, Miya, Qash, Hammamat and Atwani all have proportionately low numbers of hunting figures. Despite having two prominent hunting scenes at BAR-9/ED-1 and 10/DR-1, Baramiya has only half the number of figures engaged in hunting compared to the number standing in boats. This wadi is notable in that 50% of human images are in boats. The four nearby sites in Wadi Kanais constitute an entry point into the Central Eastern Desert and are notable for the number of boat motifs present. Wadi Qash has only three sites and QAS-3, the most prominent, is also notable for its large number of boats. Hammamat and Atwani have 16 and 13 hunting motif sites respectively and thus the results are not distorted by having small numbers of sites. Hammamat, like Baramiya, was a direct route to the Red Sea over the millennia, and has only a quarter of the hunting motifs of the latter wadi. It is also the Wadi with the largest number of pharaonic motifs. Wadi Atwani heads north, away from the wadi system of the survey area and to the north of Hammamat. The vast majority of its hunting images are at a site very close to the junction with Wadi Hammamat. In addition, it is strewn with boulders and therefore less accessible than other wadis.

Regarding the size of hunting groups, apart from those of four figures or more at HAJ(S)-1, HAJ(N)-3, BAR-9/ED-1, BAR-10/DR-1, BAR-15/DF-1, SAL-20, SAL-23, SAL-35, MUA-17, WAS-10/DR-2, and WAS-15/VF-1, all other hunting scenes involve only one, two or occasionally three figures. The largest group is at HAJ (N)-3 where 11 ‘onlookers,’ some arm in arm, are standing above four figures with bows. The figure to the right may be beckoning the others to the animals nearby (Figure 5.22). This is a unique depiction in terms of both the number of hunters and this gesture. With the exception of BAR-15/DF-1 and SAL-20 large numbers of animals are present at these sites with larger numbers of hunters. We are generally unable to trace the path of the same group of people through the wadis because the style of figures at each site is different. Only one hunting group might be followed through the wadis from Baramiya south (BAR-10/DR-1, Figure 5.23) to Hajalij(S) (HAJS-1, Figure 5.24) into Wadi Midriq (outside the survey area but here photo courtesy of C. Hanson, Figure 5.25) because they have ‘tails’ between the legs, hold a bow out in a related posture and are depicted with similar torso. This group may also be present in the Wadi Umm Salam (SAL-39) north of these depictions (Figure 5.26).



Figure 5.22. Untypical large group of hunters, HAJ-3 Morrow & Morrow, 2002: 243



Left: Figure 5.23. Same hunters? BAR-10/DR-1 EDS 46, Right: Figure 5.24. HAJ(S)-1 author's photo



Left: Figure 5.25. Same hunters (?) SAL-39, author's photos, Figure 5.26. Same hunters (?) Wadi Midriq, site unknown, photo C. Hanson

There are 82 cases where boats and hunting are present together. There are also three cases where boats are present at a hunting site but are not near to the hunting images. At 63 sites (77%) the hunting and boat images are 'Associated,' that is a boat or boats is immediately above, below or adjacent to a hunting scene (Figure 5.27). At 19 (23%) sites these images are

‘Integrated.’ This is where a boat, human and animal petroglyphs are mixed together into an integral part of the hunting scene (Figure 5.28). One site is described but is not illustrated. It is possible that at some sites a number of images are later additions. However, where patination detail is noted in both the EDS and RATS publications, allied to personal inspection of many of these sites, contemporaneous creation is probable. Where this is not the case, as at SAL-8, the difference between darkly patinated boat and lightly patinated later hunting petroglyphs is clear and cannot be counted as an ‘Associated’ scene. Not only is the association of boats and hunting notable but it is interesting that in all but three cases the associations are extremely close on the rock face.



Figure 5.27. Example of ‘Associated’ scene, SAL-28, Morrow & Morrow, 2002: 79

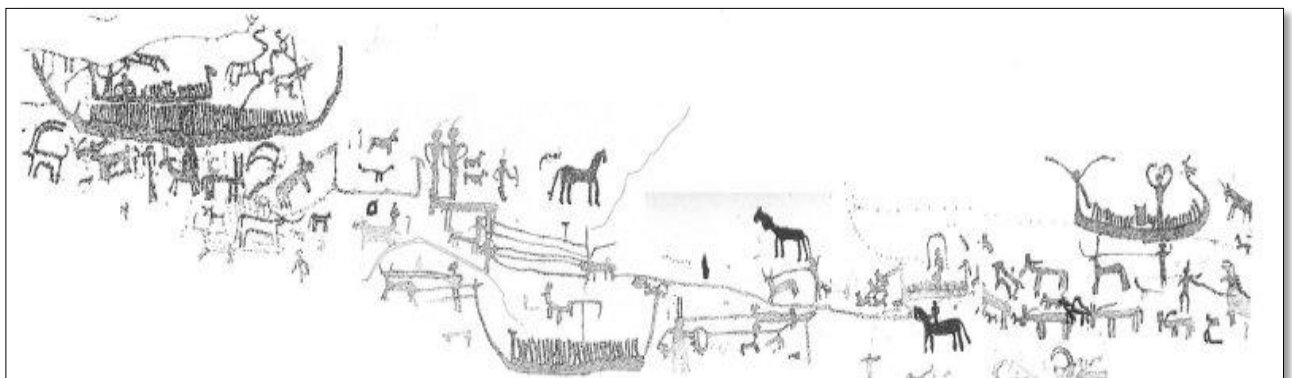


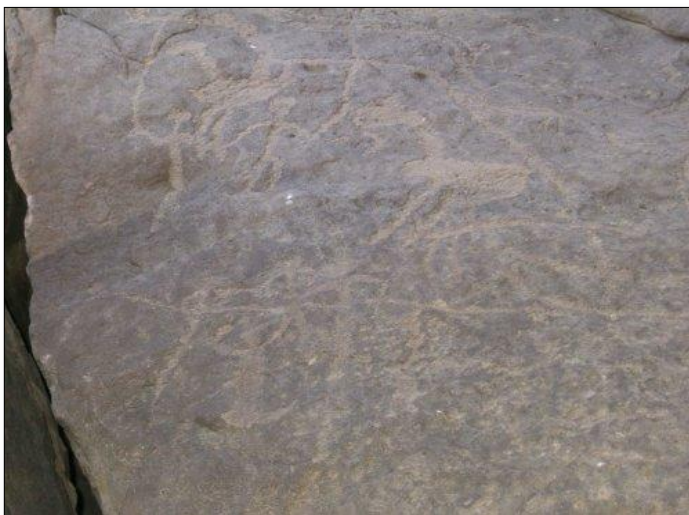
Figure 5.28. BAR-9/EDR-1, Example of ‘Integrated’ scene after Fuchs 1991

‘Integrated’ scenes are present in Wadis Hajalij (South) (3: 2 at 1 site), Baramiya (4), Miya (2 at 1 site), Hajalij (North) (4), Umm Salam (1), Mineh (1), Abu Wasil (3: 2 at one site) and Qash (1). Thus, Wadis Umm Hajalij (N) and Baramiya have the highest number of ‘Integrated’ sites and there are 13 in the south with 5 in the north-central and northern wadis. There are none in the central core wadis Abu Iqaydi and Shalul. Moreover, the Hajalij (S) and Miya sites are very close to their respective junctions with Baramiya. BAR-9/ED-1, HAJ (N)-3, and MIY-1 all stand out due to the sheer number of boats and animals present. In addition,

HAI (N)-3 is significant for its two separate 'Integrated' scenes, which occurs again at MIY-1, Hajali (S)-2 and WAS-10. The focus here is on the animals and boats as the number of figures engaged in hunting at these sites is small. At BAR-9/ED-1 only one figure carries a bow, although there are two examples of animal control, including of a bovid and a crocodile. At BAR-10/DR-1 the 'Integrated' scene again comprises only one hunter with a bow, while away to the right seven hunters and a large pack of dogs chase down prey without a close association to a boat. HAI (N)-1 has nine boats plus hunting with hippopotamus, ibex, gazelle, antelope, ostrich and asses. HAI (N)-3 has eight boats and a significant number of animal depictions, while at HAI(N)-2 five square boats, animals and two figures are present. At HAI (N)-8 there are two boats, three hunters and animals. 'Integrated' scenes are a feature of the southern wadis as 14 of the 17 examples are located there. All of these 'Integrated' scenes can be dated to the Predynastic by reference to boat design and/or the presence of an 'arms raised' figure. At MIN-13/PC-3 the images are scattered across the rock face more than at other sites, although all the elements of the 'Integrated' scene are present, while MIN-23/KW1 has boats, plumed figures and animals but no dogs. The Integrated scenes from the Wadi Abu Wasil at WAS-10/DR-2 and WAS-15/VF-1 stand out in having seven figures involved in each hunting scene against the normal Central Eastern Desert pattern of very small hunting groups or even single figures, whereas WAS-23/CC-1 has only two plumed figures, one with a bow, one boat and three antelopes. The northern area of the wadi system sees a scene consisting of a considerable number of boats, figures and animals involved only at QAS-3. There are no 'Integrated' scenes at all in Wadis Hammamat and Atwani. Within the 'Integrated' scene category, which is itself in a minority, six sites with a significantly large number of boats and animals, although not necessarily also of hunting figures, stand out. They are BAR9/ED-1, HAI (N)-3, MIY-1, WAS-10/DR-2, WAS-15/VF-1, and QAS-3/RME-18. 'Associated' sites are present mainly in the south (39) and north-central (13) wadis. There are only 3 in the core central wadis and 8 in the north. The largest number and percentage of sites in a wadi occurs in Umm Salam (21/46), with Baramiya having the second highest (18/38). It is notable that in 51 (83%) out of the 63 Associated scenes at least one large figure stands in a boat.

Hunting from boats takes place at only three sites. The first example consists of three figures in two boats at BAR-17 recorded as an ibex by Rohl (2000, 51) and a hippopotamus by Van Craeynest (2004, 11). The second comprises two animals recorded as 'tethered hippopotamus' at SAL-5 (see Figure 5.20) and the second a detailed scene at QAS-3 (Figures

5.29 & 5.30). The latter includes a crocodile and is ‘watched over’ by a figure with a staff wearing what appears to be a crown. An ‘arms raised’ figure is also present. This is the only such combination in the Central Eastern Desert petroglyphs, although a related motif has been noted south of Baramiya in the Wadi Midriq area (Figure 5.31). Although there is a very strong association between hunting and boats, it is their juxtaposition and integration within scenes which is significant. Boats on the rock are rarely utilised as riverine hunting platforms. The petroglyph scenes combine boats from the Nile Valley with animals and hunting in the semi-desert; two very different environments. Moreover, in more than 20 cases the two are integrated into tableau rather than merely standing side by side. That hunting and boat images might be drawn by ancient Egyptians familiar with the Nile Valley is not surprising, as they would have been familiar with both. Their combining, indeed acting together, is noteworthy, especially in addition to hippopotamus and crocodile hunting, which would have been undertaken from boats.



Left: Figure 5.29. Inside cave QAS-3, author’s photo Right: Figure 5.30. Winkler chalked image, Morrow & Morrow, 2002: 226.



Figure 5.31. Hippopotamus hunting from boat in Wadi Midriq south of Baramiya, photo AWT

5.8.2 Dating

Dating without clear associations to identifiable Nile Valley motifs is difficult. Only one pharaonic figure (at HAM-6) carries a bow, but it is not situated in a hunting scene. Of the minority of hunting scenes not associated with boats, horse and camel riders are heavily involved in Wadi Shalul and the first four Wadi Mineh sites. Together with further examples from Wadis Miya and Iqaydi, this gives a general central location in the wadi system for these scenes. Boat-less hunting scenes will prove almost impossible to date. Usually consisting of a hunter with dogs and often with ibex, these scenes could date from a very wide period of time since desert hunting continues to this day. Evidence for this is seen at SAL-6, 8 (Figure 5.32), and 9 where the hunting figures have a very light patination and are clearly later additions. Therefore even where a boat is present nearby they cannot be said to be associated. The only situation where an attempt at dating in these cases can be made is if an 'arms raised' figure is present, as in the scene with three such figures at SAL-35, although the presence of an elephant or giraffe in the scene assists. In the SAL-35 composition there is a giraffe, but a significantly darker patination shows that the rest of the scene was added to it. Although there is a boat petroglyph on the rear of the adjacent large boulder, it is only the presence of the 'arms raised' figures which allow confident assigning of the whole scene to the Predynastic.



Figure 5.32. Lightly patinated hunting scene with single hunter next to earlier darkly patinated boat, SAL-8, author's photo

As previously noted, 82 of the 93 sites where human figures are engaged in hunting there is a close association with boats (83%). At only two (8%) of the 24 sites where dogs but no human hunters are shown is there an association with boat petroglyphs. It should be noted that sites where boats are present and animals are not are quite rare. There are only 17 (7.5%) out of 222 where this is the case. Thus there is a strong correlation between hunting images

and those of boats and animal images and boats. Wadi Umm Salam stands out in having 16 sites where hunting scenes and boats are not associated, including three where dogs alone chase giraffe. The boat/hunting combination has occurrences of over 40% only in the southern wadis of Baramiya (44%), Hajalij (N) (55.5%) and Umm Salam (43%) with significant percentages in the northern Central wadis Mineh (28%) and Abu Wasil (32%). Central Wadis Iqaydi and Shalul and northern Wadis Hammamat and Atwani have low percentages. All of the 'Integrated' scenes are predynastic, while only 6 of the 'Associated' ones are 'Late.'

5.8.3 Discussion

Hunting is the predominant activity in which human figures are engaged and there is a clear association between hunting and boats especially in the southern wadis, while it is not a major activity in the northern area. Except in a small number of notable sites it is an activity carried out by only small groups of hunters, not large parties. Therefore, these do not represent large expeditions to acquire food. Hunting with dogs is common and a considerable number of hunters carry bows. Umm Salam stands out here as being a wadi where the figures are shown using a large number of dogs, whereas that of bow carrying figures is low. This seems to represent a strategic reality on the part of the hunters and those who depicted it. The chase was the preferred method in this narrow wadi which has few hiding places where a missile armed hunter could hide or stalk. The rock-art may therefore accurately reflect what happened in the wadi. This contrasts with Baramiya, which although in most places is not very wide, has many side wadis where hunters could wait out of sight ready to shoot rather than to run down prey. Interestingly, the result of a hunt is never shown. No dead or dying animal is illustrated, nor are there representations of people carrying the result of a successful hunt. Only the action of the hunt itself is shown. Apart from the examples of hippopotamus harpooning, there are only two examples of weapons in use, one where an ibex is stabbed with a spear and another where a javelin is mid-way between hunter and hippopotamus. In contrast, dynastic tomb paintings hunting scenes do show animals hit by arrows as well as carcasses.

5.9 Posture

Figures have hitherto been identified as carrying out hunting or animal control, carrying a staff, spear or sword and shield, or standing in boats. In order to determine the activities the remaining figures are engaged in, 21 poses are identified concerning 283 which can be

identified. These poses depend mainly on the position of the arms; for example, if they are raised, or whether one is raised, if they both hang down or are stretched out etc. Of these, 143 have a basic posture where the arms are drawn with hands on hips or hanging down. When human beings stand around they must do something with their arms and to place both hands on one's hips is a natural thing to do. In addition, when most people are asked to depict a human figure they will do so with these postures. Other postures are likely to be variants of these basic forms. Therefore these depictions show the presence of a human being but do not in themselves necessarily demonstrate an action being undertaken, although significance may be shown by association with other petroglyphs. Those postures which add meaning are where the arms are raised or one is engaged in pointing since these are departures from a normal standing position. There are 62 figures with both arms in the classic incurved position above the head with 31 examples where the arms are raised, not necessarily above the head and not incurved, and 11 cases where one arm is raised. In addition, in five cases a pair of figures stands with linked arms, six have one hand on a hip and the other straight out, perhaps pointing. Seven Naqada style figures in Wadi Atwani hold hands, and in the line of 11 figures in the top level at HAJ (N)-3 a number rest an arm or arms on each other. In addition, seven figures at BAR-1 seven very thin figures have arms outstretched touching each other in a row. One figure at KAN-1 plays a pipe, identified by associated Greek letters as a late period addition.

Apart from the 'arms raised' figure there are few groups which might be described as dancing. SAL14 sees a row of five figures, three in the basic pose and two with one or both arms raised, perhaps two dancers plus onlookers. Both BAR-4 and KAN-2 have figures with one arm raised and incurved, with the other stretched out. HAJ (N)-3 has the highest number of figures standing in a line (11) and combined in a group (15). In the bottom line the figure to the right with a bow in one hand raises the other, perhaps in a gesture beckoning the others to join a hunt, since he is nearest to the animals shown. This site is illustrative of the uncomplicated nature of the human petroglyphs generally. Some of the figures standing in line are shown with only one arm, while the 'beckoning' figure is more detailed, with a bow and the suggestion of a garment.

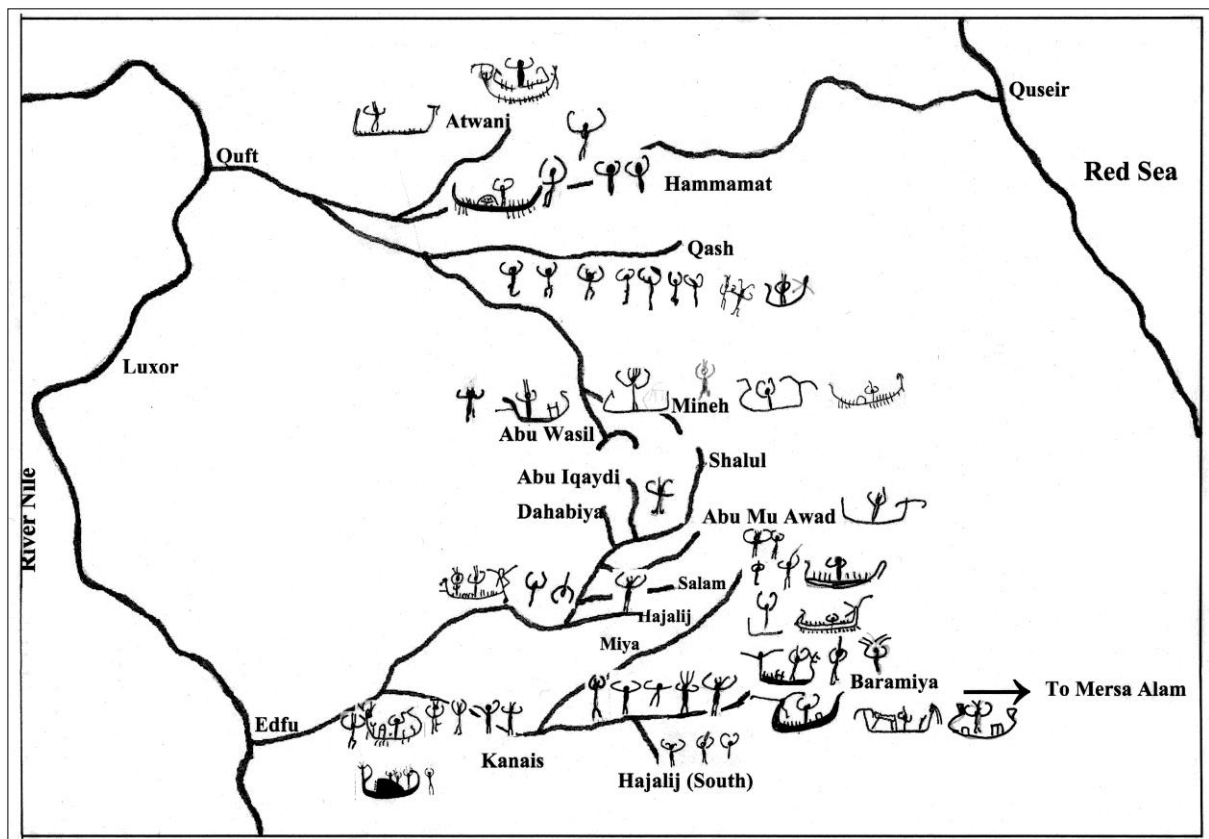
5.10 'Arms Raised' Figures

An 'arms raised' figure is here defined as one where the arms are drawn up making a circular pattern raised above the head, slightly bent at the elbows creating an arc and reaching to the

head or above. Any figure where the arms are raised in an apparent ‘praise’ motif, but are not curved in-wards, is not counted as an ‘arms raised’ figure.

5.10.1 Distribution

Although the ‘arms raised’ figures have received a great deal of attention due to similarities with motifs on Naqada II D-Ware pottery, there are only 62 (7%) recorded at twenty-nine sites (11.5%) in the Central Eastern Desert (Map 5.12 & Tables 5.12/5.13, Appendix Three). [Another, standing in a boat, has been noted by Douglas Brewer on the University of Illinois website but its location is not reported]. There are none in the Wadis Dahabiya, or Shalul, and perhaps one in Wadi Iqaydi, reinforcing evidence for a North-South divide in the petroglyph distribution, with the figures present mainly in the north central Wadis Mineh and Abu Wasil of the central area.



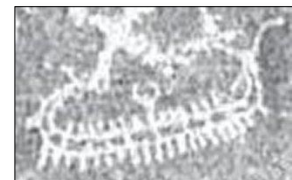
Map 5.12. Distribution of ‘arms raised’ figures recorded in the Central Eastern Desert

63% of the sites with ‘arms raised’ figures and 58% of the figures are in the southern wadis, whereas just over half of all wadis can be classified as ‘southern.’ While there are no examples in the main central Wadi Shalul, and one damaged and doubtful example in Wadi Iqaydi, 17% of the sites with ‘arms raised’ figures and (only) 13% of the figures are in the central sector (38% of all sites). Thus figures are mainly confined to the northern central area.

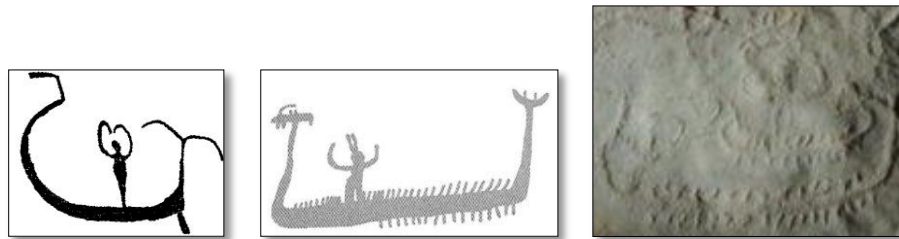
24 % percent of sites with ‘arms raised’ figures are in the northern wadis, and 29% of the figures. Thus there is a significant bias to distribution in the southern and northern wadis. Within the southern wadis the Wadis Kanais and Baramiya stand out with high percentage of sites. Although named as separate wadis, Baramiya is essentially a continuation of Kanais and this combined route therefore contains a third (32.25 %) of all the ‘arms raised’ figures. Moreover, the Wadi Hajalij South is a side wadi running from the Wadi Baramiya. If Hajalij South is combined with the Wadis Kanais and Baramiya, then this area’s significance is even greater. It has 23, 37% percent of all the ‘arms raised’ figures. MIY-1, with two additional figures is close to the junction with Wadi Baramiya. Therefore, 40% of the total is found in a limited area within the southern wadis. Their incidence in northern wadis is significantly higher than their proportion of the total number of wadis and Wadi Qash stands out as having a large number of figures at one site (QS-3/RME-18). The low figure of 13% of images in the central area shows again that the central wadis are under-represented in the amount of petroglyphs found there and most of these are located in the north-central Wadis Abu Wasil and Mineh. Two other examples have been located south of Baramiya, in Wadis Sibrit and Midriq (Judd, 2009 & Figure 5.31). Both stand in ‘triple frond’ boats.

There is a strong relationship between the ‘arms raised’ figures and boats. 27 (40%) of the individual figures are actually positioned in a total of 23 boats and 17 out of the twenty-nine sites (58.5%) have at least one ‘arms raised’ figure in a boat. There is a particular association between the figure and the ‘three frond’ boat in the southern wadis (Figures 5.27-29).

Although variations of this design are found throughout the Central Eastern Desert, no ‘arms raised figure’ stands in a ‘three frond’ boat outside of the southern wadis north of Umm Salam; although it is present in several kinds of boat (Figures 5.33-38.) The 10 figures in Wadi Qash stand out because only one is in a boat among a considerable number of figures at one site. While some of these figures stand alone, others are associated with animals.



Left: Figure 5.33. ‘Arms raised’ figures in ‘triple frond boat’ BAR-4, author’s photo, Centre: Figure 5.34. BAR-9/EDR-1 photo D. Rohl, Right: Figure 5.35. MIY-1 Morrow & Morrow, 2002: 161



‘Arms raised’ figures in other boat designs Left: Figure 5.36. Min-10/RME24b, Centre: Figure 5.37. ATW-10/AB-2 Rohl, 2000: 145, Right: Figure 5.38. ATW-13/AG1 author’s photo

Notably, there are only four places at which an ‘arms raised’ figure is present without there being a boat petroglyph also present at that site. One is BAR-8 (Figure 5.39-not shown in the EDS), where a single multi-plumed figure stands amongst a herd of ibex. This is noted as part of the same site as two boats and bovids, plus hieroglyphs dating from Tuthmose I, on a sloping main wadi cliff face 25 metres to the right. Given the distance between the two sets of images, differing heights and subject matter, they might be judged as actually constituting separate sites. Another occurrence is in the Wadi Hammamat schist quarries, where two figures stand in the middle of a mass of animal petroglyphs (Figure 5.40). They include many ibex and have hieroglyphs partly carved over them. The third is SAL-20 where a single-plumed ‘arms raised’ figure accompanies four other plumed figures, one of them carrying a bow and another with a throw-stick, together with a pariah dog, a bovid and an unidentified animal (Figure 5.41). Finally, at SAL-35 three figures stand amongst a mass of animals being chased by dogs (see Figure 5.2). No boat petroglyphs are present on the main rock surface, although two are on the back of the nearby massive boulder.



Left: Figure 5.39. ‘arms raised’ figure among animals BAR-9/DB-1 author’s photo, Centre: Figure 5.40. Hammamat quarry, HAM-18, author’s photo, Right: Figure 5.41. SAL20, author’s photo

5.10.2 Dating

The figures can be dated by comparison with similar Nile Valley motifs. Despite it being most prominent on D-Ware (Graff, 2009), and therefore dateable to Naqada II c/d, there is good reason to place many of the desert ‘arms raised’ figures earlier. In the southern wadis

they are associated with the ‘frond’ boat with an S-shaped prow shown on a single clay box from El Amrah and dated to either Naqada Ic (Randal-Maciver & Mace, 1902) or Naqada IIa (Graff, 2009: 250). In the central and northern wadis none are, although three stand in boats with the ‘T’ stern feature which are contemporaneous with the ‘frond’ boats in southern scenes. There are only a dozen Naqada II c/d boats in the Central Eastern Desert, (see Chapter Six, Map 5.10) and none of them are associated with an ‘arms raised’ figure. Neither are these vessels usually associated with large-scale animal and hunting scenes, which is with the ‘frond’ boats. The Gebelein Linen, which has four ‘arms raised’ figures among other ‘dancers,’ in addition to hippopotamus hunting and boats, dates to Naqada Ic (Adams & Cialowicz, 1988: 37). There are also five examples of the figure on C-Ware pottery, but none are associated with a boat. On the other hand, the later D-Ware examples are definitely associated with boats with only one (un-provenanced) exception (Graff, 2009). Given the strong relationship between the earlier Naqada culture (Ic-IIa) ‘frond’ boat, it is likely that most, if not all, of the desert figures belong to this period. The lack of Naqada IIc/d images, especially the typical D-Ware boat and male figures with throw-sticks, strengthens this contention.

5.10.3 Discussion

30 (48%) of the ‘arms raised’ figures wear plumes, 25 (69%) of the southern examples doing so, while they are much rarer on figures in the northern wadis. There only 2 out of the 18 (11%) do so. All except one of the figures on D-ware Naqada II pottery do not have plumes, so there may be a regional connection. Therefore, these figures are more likely to have plumes than those without their arms raised. ‘Arms raised’ figures are somewhat more detailed or created with more care than other human images. 5 (7.5%) are ‘Stick’ and 16 (24%) ‘Other’ in style, the latter being principally due to the number drawn in boats without the legs being shown, as has been noted concerning figures in boats generally. Thus ‘Realistic’ examples figure prominently. Unlike the formal style on Nile Valley D-ware pottery, these figures can be very different even at the same site. For example, BAR-4 there are three ‘arms raised’ figures. One is a straight figure in a ‘frond’ boat (see Figure 5.27), another crooked, and a third unusually has three plumes. There are also three examples of a figure with one arm raised and incurved but the other stretched out at KAN-1 (Figure 5.42-hitherto not noted in any publication), BAR-4 and IQA-8. The first two stand with groups of figures in the classic incurved arms style. In addition, all but one figure in the Central Eastern Desert (above the main panel at BAR-4) is associated closely with animal depictions-usually

a considerable number, although there is only one animal close by at the BAR-4 main face and at ATW-13.



Figure 5.42. Figure with one arm raised and other outstretched, KAN-1, author's photo

'Arms Raised' figures stand out, not only in the unusual gesture they perform, but also in their tendency to be more adorned with plumes and more carefully depicted than other human petroglyphs. Since all but one of the figures are associated with animals, usually hunting, and very often with boats, they appear to have a special function, which will be explored in detail in Chapter Eight. It is notable that in many rock-art scenes they stand among animals and boats, rather than following the animals into the wadis.

5.11 Other 'Arms In Air' Figures

An additional 35 figures have raised arms, but not in the incurved position above the head at eighteen sites (Appendix Three, Table 5.14). They are spread throughout the survey area, with Wadi Mineh the only wadi without an example, while Wadi Abu Wasil has the largest number with six. Apart from two lightly patinated figures associated with modern graffiti, these Abu Wasil figures are found in Integrated scenes at WAS-10/DR-2 (RME-26) and WAS-16/VF-1 which can be dated to the Predynastic, as is a single figure in a boat at BAR-9/EDR-1. Three figures at KAN-1 associated with the 'golf club' boat have one arm raised and the other outstretched. Two figures at HAJ (N)-4 in a centrally-masted boat must be pharaonic or later, while a figure each at MUA-12 and DAH-2 have the arms raised vertically in what may be a pharaonic gesture, even though there are none which are directly comparable with Nile Valley examples. Most of the other figures, including those at HAJ (N)-4 have their arms upturned in a semi-circular manner, which may be a 'praise' action.

5.12 Figures in Boats

At 237, human figures standing in boats at 91 sites (41% of boat sites) constitute the second

largest theme considered here, just 17 examples less than hunting (Appendix Three, Table 5.15). These are recognisable human representations in addition to any ‘crew’ shown by simple short strokes. The contrast in differentiation and scale between the figure(s) and ‘crew’ is marked. . Nearly 80% of the 174 boats with figures on board have a single example (Appendix Three, Table 5.16). This single central figure contrasts with the many ‘crew’ shown in a boat, although the vast majority of boats are not shown with ‘crew’ at all. It is the vessel and the central figure which are significant. Only one boat has as many as seven figures on board; a unique boat design at WAS-9. The next highest number is five, including the notable ‘chieftains’ with bows at WAS-10 (Figure 5.43). The prevalence of one central figure over the whole of the survey area is noteworthy.

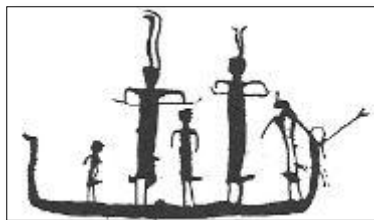


Figure 5.43. ‘Chieftain figures’ in boat at WAS-10 (RME-26)

5.12.1 Distribution

One or more large figures in a boat are a feature of all the wadis except for central Wadi Dahabiya (a small side wadi). There are few examples in the main central Wadi Shalul, continuing a pattern of fewer significant images in this wadi. Generally, it is the major wadis in terms of number of sites which also see the largest number of central boat figures. Wadi Baramiya, at forty-three examples (21%) does stand out among these as having the highest incidence in having 20% of sites with figures, while Wadi Abu Mu Awad with only six sites has a low incidence for a wadi with 22 sites overall. Again the central wadis of Iqaydi and Shalul have very low percentages of boat petroglyphs. On the other hand, both the north central Abu Wasil and Mineh have a large boat figure at half the sites in each wadi. Baramiya also has the sites the second and third highest number of occupied boats-five, and four (along with one site in Wadi Kanais and another Baramiya site, BAR-4 plus ATW-12/ER-1) with WAS-10/DR-2 the highest at six. Baramiya is unique in having three sites with four occupied boats or more.

5.12.2 Dating

14 of the 174 boats can be dated to the pharaonic period or later by virtue of having a central

mast, a clear late design or a late figure on board (Figure 5.44). 90 can be assigned to the Predynastic through having an identifiable design or association with other predynastic images. Thus 104 can be dated, but 70 (40%) cannot be. As is the case with boat petroglyphs in general, a significant proportion lack the context to be given a firm date. However, it is clear that of those which can be dated, the overwhelming number, 86.5% of boats with one or more central figures, can be assigned to the Predynastic. 19 of the figures stand in dynastic or later boats, while 107 are in predynastic boats (including 'arms raised' figures). Therefore, 126 (53%) of these figures can be dated.

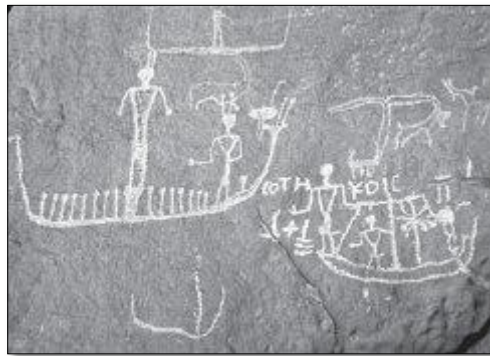


Figure 5.44. IQA-10, Late figures dated by presence in boat with central mast and Greek lettering, Morrow & Morrow, 2002: 143

5.12.2 Discussion

There is a notable difference between the detailed large figures standing in boats and the conspicuous lack of detail of crew. However, as only 35% of figures in boats are Realistic, fine detail of these figures does not appear to be important (Appendix Three, Table 17). IQA-10 (Figure 5.44) demonstrates that not every figure in a boat or every one with plumes has an early date, but most do. A large figure in a boat is certainly a feature of those wadis which have a considerable number of predynastic sites and boats, Kanais/Baramiya, Umm Salam, Abu Wasil and Mineh having concentrations of these figures. The overwhelming majority of examples feature one large figure, rather than a group, and wearing a feather is significantly represented. If a funerary connection is accepted, then the occupant of the boat could be the deceased. An argument against this is that there are often several boats with a figure in each in a scene. In the late predynastic the only clear divine figure is a falcon who in dynastic times we know by the name of Horus, a nomenclature which appears in the titular of the 1st dynasty kings. But this is at least 500 years after many of the predynastic petroglyphs were created. The only anthropomorphic god for whom there may be evidence in the late

predynastic is the ithyphallic Min. However, there is only one such figure in an early boat at Kanais Temple. Therefore, it is very unlikely large figures are gods. They could represent ancestors or family members of the deceased/the petroglyph creators, but there is no way of testing this hypothesis. All of the predynastic ‘Integrated’ and ‘Associated’ scenes have at least one example of a large central figure in a boat. Thus it would appear that an authority figure was required in these cases.

5.13 Combinations

A combination is where two or more of the 16 features explored here are present. The main combinations are where a plumed figure stands in a boat and where a plumed figure carries a bow. Other combinations consist of a plumed figure with a ‘tail’ or carrying a bow/staff, an ‘arms raised’ figure standing in a boat, a figure with a bow standing in a boat and with a throw-stick standing in a boat. Some of these are rare. Whereas 31 (15%) plumed figures carry a bow only two have a staff. Of those with a bow seven are in Wadi Hajalij(S) which only has two sites, six at HAJ(S)-1. Wadi Umm Salam has 14 examples, while Wadis Kanais, Hajalij (N), Miya, Iqaydi, Dahabiya, Qash, Hammamat and Atwani have none (Appendix Three, Tables 5.18-20). This combination is more carefully drawn than figures in boats as seventy percent are Realistic. The most numerous combination, with 64 examples, is where a plumed figure stands in a boat (26.5% of all plumed figures, Appendix Three, Tables 5.21-23). Only eight figures with or without plumes hold a bow and stand in a boat and just five with a throw-stick do so. These are mainly concentrated in Wadis Umm Salam and Abu Wasil, however one example in Baramiya stands out in that, unusually, hand on hip figures holding a bow can be found at a number of sites in the southern wadis and Kom Ombo Drainage Basin (see Figure 5.26). 15 figures carry a bow and wear a ‘tail,’ seven overlapping with figures with plumed figures at HAJ(S)-1, SAL-25, SHA-7, and WAS-10/DR-2 in that they possess plume, bow and tail. Overall, 21 human figures have a bow/tail/feather combination. This is a low number and indicates that generally hunters portrayed in the Central Eastern Desert petroglyphs did not consider it vital to have a tail and feathers associated with the animal prey they were hunting in contrast to those on the Hunters Palette. The largest combination numerically is that of plumed figures in boats. But even here three-quarters of figures in boats do not wear plumes. 35 of these are Realistic (54.5%). Even for these images, which may represent authority figures, many are not carefully and realistically portrayed. Overall, the small number of combinations of features shows that many of the human figures in the Central Eastern Desert are simply drawn and lack fine detail. This is

especially the case regarding figures in boats, although they are depicted in much greater detail than crews. However, the more features are added in the combination, the more significant the figure becomes. Those images with plumes, a bow and ‘tail’ can be described as detailed and fully equipped hunting figures. The presence of several features for a figure standing in a boat, especially having plumes and a bow or throw-stick, suggests that figures with these accoutrements possess status.

5.14 Conclusion

A seven-fold typology has been presented for the human figures here, and combined with their accoutrements and activities. The petroglyphs in the Central Eastern Desert are generally simple. Indeed, outside of the Realistic examples they are often crude in the quality of depiction and lack detail. Although a significant number are shown wearing plumes or carrying a bow, additional features are rare. Furthermore, indications of clothing and gender are extremely rare. It is also notable how few combinations of features, for example: figure + adornments + weapons, there are. The most popular activities undertaken by figures, most of which (when dateable) can be assigned to the Predynastic, are hunting and standing in a boat. A firm conclusion can be reached that the main activity shown by the petroglyphs is hunting and not herding. It is also clear that the hunting groups portrayed consist usually only of two or three human figures with notable exceptions in Wadis Baramiya, Hajalij (N) and Abu Wasil. These wadis in particular, also have ‘Integrated’ scenes where animals, boats and hunters are part of an interactive tableau, rather than merely having boat petroglyphs associated with separate hunting portrayals. Most of these ‘Integrated’ scenes can be dated to the Predynastic (for a definition of the ‘Associated’ and ‘Integrated’ scenes-see Chapter Two, page 33).

It must be noted that possession of plumes and a bow alone does not necessarily reflect high status. Today, hunters without elite chieftain status in the Omo Valley, Ethiopia, wear feathers-one, two and multiple plumes (Farry, 2008; Figures 5.45 & 5.46). Moreover, modern Sahel Wodaabe migrant cattle herder men use personal decoration, including feathers, in order to impress women and each other (Bovin, 2001). They can thus be expressions of personal vanity. It is the combination of the plumed figures in hunting scenes with boats, and especially since nearly every ‘Associated’ and ‘Integrated’ scene includes a large figure standing in a vessel, that suggests that these examples possess high status and are engaged in

more than mere adornment. Many of these can also be associated with motifs found in high status Naqada graves (see Chapter Eight).



Feathered Omo Valley figures, Left: Figure 5.45. Double plumes, Right: Figure 5.46. Multiple plumes, Farry: 2008.

Regarding the quality of depiction of the figures it is apparent that while just under half of the figures are complete and thus ‘realistically’ depicted, many were not carefully worked. Altogether, a third of the human images are either Stick figures or incomplete in some way, further evidence that in many cases over the millennia the petroglyph creator did not consider detail to be important. The many stick figures and figures in general with the ‘basic’ pose indicate a desire to show travellers’ presence in the wadi system but not necessarily to indicate an activity. In contrast, the creators at the ‘Integrated’ scenes showed more detail and generally, apart from the Pharaonic type figures which specifically correspond to Nile Valley tomb paintings. Generally, apart from these, the more detailed a figure is the more it is likely to date from the Predynastic. It is also clear that in both the ‘Integrated’ and ‘Associated’ scenes a figure standing in a boat is crucial.

The distribution of human figures follows that of animals and boats in that the southern wadis have a majority of images and a higher percentage than their share of sites in the survey area. The central wadis Iqaydi and Shalul have fewer images, fewer predynastic figures and also fewer hunting and boat scenes. This indicates a discontinuity between the northern and southern areas of the Central Eastern Desert. Wadi Shalul in particular has a considerable number of late horse and camel riders, and scenes of conflict which are entirely absent from the rest of the petroglyph scenes. Hunting scenes are rare in the northern wadis, but common in the north-central Wadis Mineh and Abu Wasil and in the southern area. Hunting with dogs is prevalent overall and is the preferred method of hunting in Wadi Umm Salam. Elsewhere

the bow is a popular implement, while the throw-stick is rare and usually held by a figure in a boat.

Figure Type	Distribution	Dating	Other Features
Realistic	South & Northern Central	Predynastic	
Stick	South	All Dates	
Triangular	South	Predynastic & Pharaonic	Small number
Naqada	North	Naqada II	Only at 1 site
Pharaonic	North	Mainly New Kingdom	Concentration in Wadi Hammamat
Camel & Horse Rider	Central	1st. millennium onwards	Uniquely engaged in fighting
Other	Evenly spread	Predynastic when in boat	

Table 5.24, Distribution & dating summary for human figure images in the Central Eastern Desert

A notable feature of the Central Eastern Desert petroglyphs is that even in sites adjacent to each other it is usually not possible to identify figures so similar that we can note the same creator. This can be stated even for the ‘arms raised’ figures. Considering three consecutive sites in Wadi Baramiya, 8, 9 and 10 (Figures 5.5, 5.6 & 5.7 DB-1, EDR-1, DR-1) these have either hunting or cattle ‘control.’ At BAR-8/DB-1 the two figures are plumed, control bovids and have quite thin torsos, while at BAR-9/EDR-1 the figures have a ‘tail’ Type II and have more proportionate torsos but no plumes. The single figure at BAR-10/DR-1 may have a phallus and its torso is thin. The figures involved are all sufficiently different that it is extremely unlikely that they were made by the same hand. Even in Wadi Abu Wasil where two significant sites are only a hundred and fifty metres apart the figures in ‘Integrated’ scenes at WAS-10/DR-2 and WAS-16/VF-1 are dissimilar (Figures 5.4 & 5.8). Most noticeably, the ‘chieftain’ figures with their detailed clothing, statuesque posture and long tubular plumes (see Figure 5.4) are from a different hand to the multiple-plumed figures at

the latter site. Apart from the figures with a bow held in front of the chest discussed in the ‘weapons’ section, no two sites can be assigned to the same creator as far as the figures there are concerned.

The lack of fine detail and the method of pecking which makes depiction of such detail difficult have hindered classification of the human figure petroglyphs. However, it is evident that many different hands are responsible for these images. Each site appears to be the creation of a separate artist, although a few further additions may have been made over time. This suggests that each small group of people moving through what is now the Central Eastern Desert had its own route and its own rock-art site. There is one possible exception to this in the hunters depicted with one hand on hip and the other holding a bow. These appear to range through the southern wadis from Baramiya to Salam and Miya and south into Hajali (S), and beyond to Wadi Midriq in the Kom Ombo Drainage Basin. One of these figures stands in a square boat in the major tableau at BAR-9. It is clear that this is not a later addition as there is a deliberate gap in the stick ‘crew’ indicated (Figure 5.47). The presence of the ‘arms raised’ figure over the whole wadi system among very varied depictions of figures and many boat designs does suggest that these people had a common culture in the predynastic era in which this figure occurs, until it drops out of the record in the Naqada III/Dynastic period.



Figure 5.47. ‘Hunter’ figure with hand on hip holding bow & standing in boat, BAR-9, author’s photo (digitally enhanced)

There is no consensus on the meaning of the ‘arms raised’ figure. Winkler (1938,) saw the function of the arms as making either a gesture asking for luck in hunting or in mourning. Ucko (1965) suggested the gesture in figurines found in graves as intended to cause rain or the continued existence of the sun, while the Turin Museum publication of the Italian concession at Gebelein describes them as a dance in honour of the deceased (Museo Egizio, Turin, 1994). Červíček (1983) believed it to represent a fertility dance and a precursor of the ‘Ka’ sign in hieroglyphs. More recently, Graff (2009) interpreted it as part of the renewal of

life of the deceased in the afterlife the tomb acting as a container for this purpose, whereas Huyge proposed a sun-bearing posture associated with the diurnal rise of the sun (Huyge, 2002). Hitherto, the close association, indeed integration into animal/human/boat scenes, has not been subject to detailed examination. This, and the purpose of the ‘arms raised figures, will be considered in Chapter Eight.

Chapter Six

Boat Depictions

6.1 Introduction

This chapter aims to analyse the boat motifs found in Egypt's Central Eastern Desert. An outline of the major five boat types is followed by one of the main additional boat features. Images of boats are present at 187 (76%) of sites in the Central Eastern Desert and most of the main wadis have boat images at three-quarters or more sites. The total number of boat motifs in the corpus is 884. However, 50 are not identified or are described as 'high-prowed' or 'small' boats. A number of these are likely to be square-hulled. This is because the EDS recorders were especially interested in square-hulled high-prowed boats, since these were labeled as being 'Eastern Invader' vessels by Rohl. Therefore, 834 (94%) are illustrated or described in detail, and this comprises a representative corpus giving a sufficient proportion of the boat petroglyphs to study. The chapter firstly presents the basic five-fold boat petroglyph typology. After that, the typology is refined by noting the presence and distribution of features the vessels possess: those indicating a structure or method of propulsion, and those with human beings involved. Next, the chapter outlines how the various boat types are distributed over the survey area. Boat images are then assigned a 'Predynastic,' 'Probably Predynastic,' 'Pharaonic/Late date,' or are designated 'Unclassified' (see Chapter Two: section 3 for methodology, and Appendix Six for site by site dating information). Next, the distribution of the dated images is described and the significance of this distribution pattern is discussed, both within the survey area and in comparison with the Nile Valley to answer the question as to why boats are found in the desert.

6.2 The Boat Typology

In Chapter Two previous typologies were examined and found to be too imprecise, with an over-reliance on defining each type by the shape of the hull. This resulted in too many individual types often comprising a very small number of examples of vessels. As a result I present a typology with the aim of overcoming this issue.

6.2.1 Basis for the Boat Typology

The principle behind the boat typology is that it should be comprehensive in its ability to permit comparison of predynastic and pharaonic boat petroglyphs, while at the same time being manageable in the number of discrete types it contains. Additional features such as ties, standards, streamers and other appendages do not alter the basic shapes. Importantly, it is necessary to avoid the pitfall of having too many different types with too few petroglyph examples in each category (see Chapter Two, 2.3.2). By this means not only is a confusing plethora of types avoided, but classification based upon hull shape can be modified by examining additional features which allow the examination of function and the ability to date as many boat images as possible. Above all, the basic five-fold typology has the merit of both being comprehensive and possessing simplicity and, therefore, accessibility.

6.2.2 The Five Boat Types

The typology presented here divides the boat petroglyphs into five categories: 'Sickle,' 'Incurved Sickle,' 'Square,' 'Incurved Square' and 'Flared.' 'Sickle' vessels are approximately semi-circular and symmetrical ('a' Figure 6.1), making identification easy, but making determination of the direction of travel often problematic. 'Incurved Sickle' boats are similar, but have a stem and stern which turn inwards ('b' Figure 6.1). The 'Square' type is defined by its straight hull with upright prow and stern ('c' Figure 6.1), while the 'Incurved Square' boat has a straight hull but incurved stem and stern ('d' Figure 6.1). The 'Flared' example has a flat hull shape like the 'Square' type, but is asymmetrical, having both an angular stem and stern ('e' Figure 6.1). The typology is refined by noting those examples possessing one or (rarely) more additional features. They are divided into structures or methods of propulsion: a cabin, mast/sail and oars, and those involving crew, one or more large figures, a tow line and/or boat draggers. These will be treated as extras to compare

with media from the Nile Valley in order to date the boat images. The distribution of each boat type in the survey area is summarized in Table 1 below.

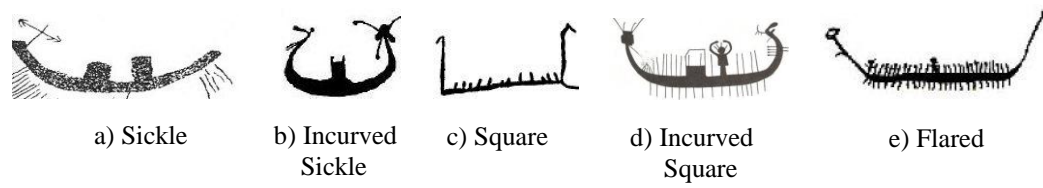


Figure 6.1. The five boat types

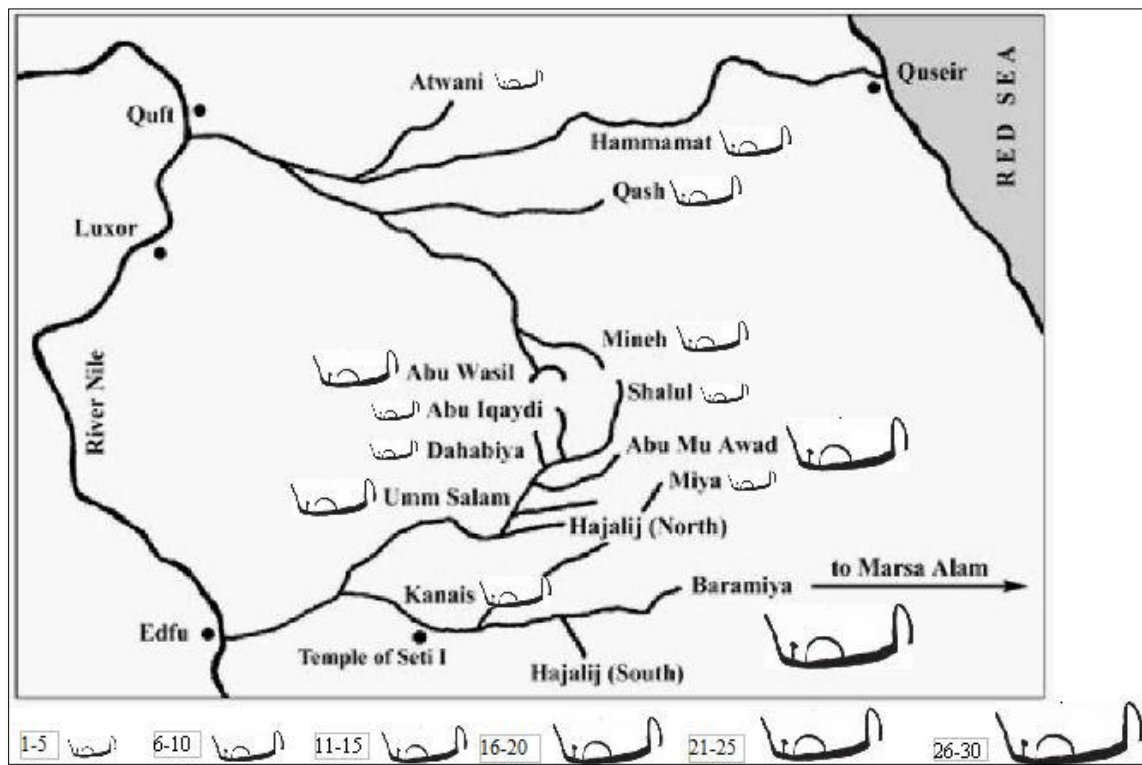
WADI	Sites in Wadi	Boat Sites	% of Sites in Wadi	SICKLE BOATS	% of all Sickle Boats	INCURVED SICKLE BOATS	% of all Incurved Sickle Boats	SQUARE BOATS	% of all Square Boats	INCURVED SQUARE BOATS	% of all Incurved Square Boats	FLARED BOATS	% of Flared Boats	Not Identified	All Boats	% of all boats
HAJS	2	2	100	16	6%	1	2.5%	22	6%	0	0	2	4.5%	0	41	4.5%
KAN	4	3	75	8	5%	5	10.5%	6	0.5%	10	21%	0	0	0	29	3%
BAR	39	30	77	40	13.5 %	5	10.5%	87	21%	6	16%	9	20.5 %	12	149	16.5%
HAJN	9	8	100	24	8.5%	2	5%	22	6%	1	2.5%	4	9%	6	60	7%
SAL	46	39	85	40	13.5 %	5	13%	88	21%	3	8%	22	50%	12	168	19%
MIY	7	4	57	13	4.5%	1	2.5%	5	1%	1	2.5%	2	4.5%	2	22	2.5%
MUA	21	17	81	25	8.5%	1	2.5%	36	9%	0	0%	3	7%	0	66	7.5%
IQA	15	8	53	9	3%	1	2.5%	8	2%	0	0%	0	0%	1	19	2%
DAH	2	2	100	4	1%	0	0%	7	2%	0	0%	0	0%	0	11	1%
WAS	26	23	88	12	4%	2	6%	46	12%	4	10%	1	2%	9	74	8%
SHA	14	8	57	7	2.5%	0	0%	8	2%	0	0%	0	0%	0	15	2%
MIN	24	19	79	28	9.5%	3	8%	43	10%	7	18.5%	0	0%	4	85	10%
QAS	6	2	33	14	5%	10	26%	16	3.5%	2	5%	0	0%	0	42	5%
HAM	18	14	78	39	13%	3	8%	21	5.5%	5	13%	0	0%	1	69	8%
ATW	13	8	61	10	3.5%	1	2.5%	7	2%	1	2.5%	1	2%	3	23	2.5%
	246	187 (76 %)		289 (33%) [35.5 %]		40 (4%) [4.5%]		421 (47%) [50%]		40 (4%) [4.5%]		44 (5%) [5%]		50 (5.5%) [6%]	884 [834 identified 94%]	

Table 6.1. Distribution of boat types per wadi in the Central Eastern Desert

6.3 Boats with Additional Features: Structures and Propulsion

6.3.1 Cabin

A cabin, which is present in 131 boats (16%), is the second most common additional feature to the hull (after crew). Although sickle boats are more likely to have a cabin than square ones, the feature is not common in either case. This presence of a cabin is not evenly divided over the other types of boats since as many as 36% of the incurved square boats and only 11% of the square boats are shown with a cabin. The incurved square boat cabins are always small, and square or rectangular in shape. Thus it could actually be a type of screen rather than an oval-shaped cabin seen in other boat categories. Wadis Baramiya and Abu Mu Awad stand out as having the greatest number of boats with cabins, while elsewhere vessels with cabins are quite evenly spread through the survey area (Map 6.1).

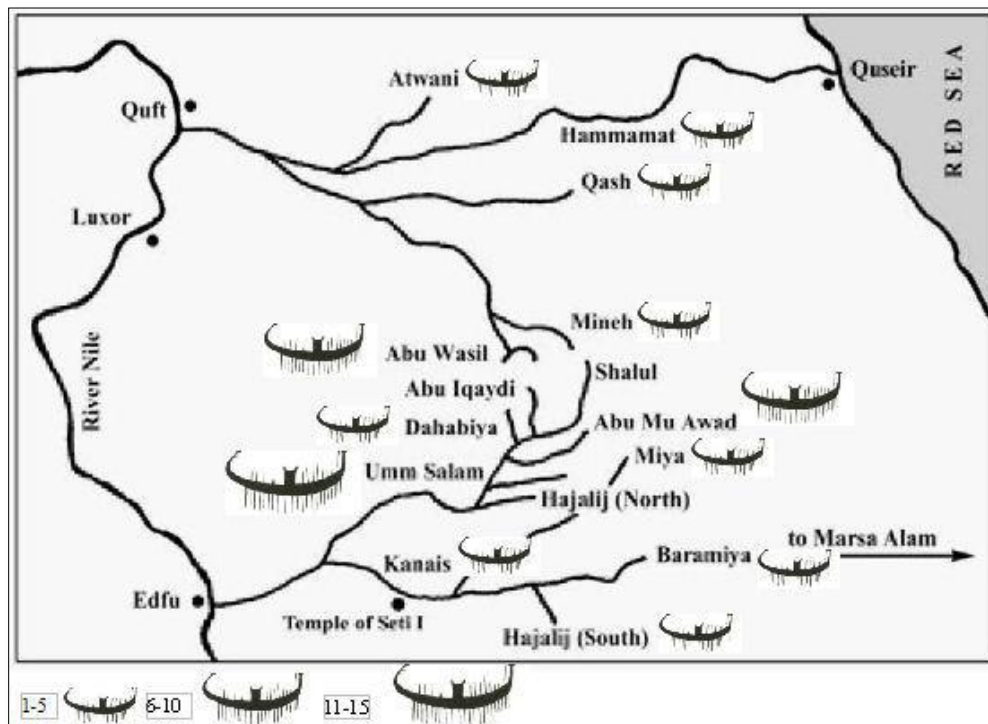


Map 6.1. Distribution of boats with a cabin

6.3.2 Oars

A method of propulsion is a rare feature on any boat image and only 49 (5.5%) are shown with oars. None of the boat categories have a significant proportion of oars. Paddles are never indicated. Sometimes the simple line of the oar is continued above the deck to indicate the rower, but there are no examples of a recognizable human figure rowing. Wadi Umm Salam

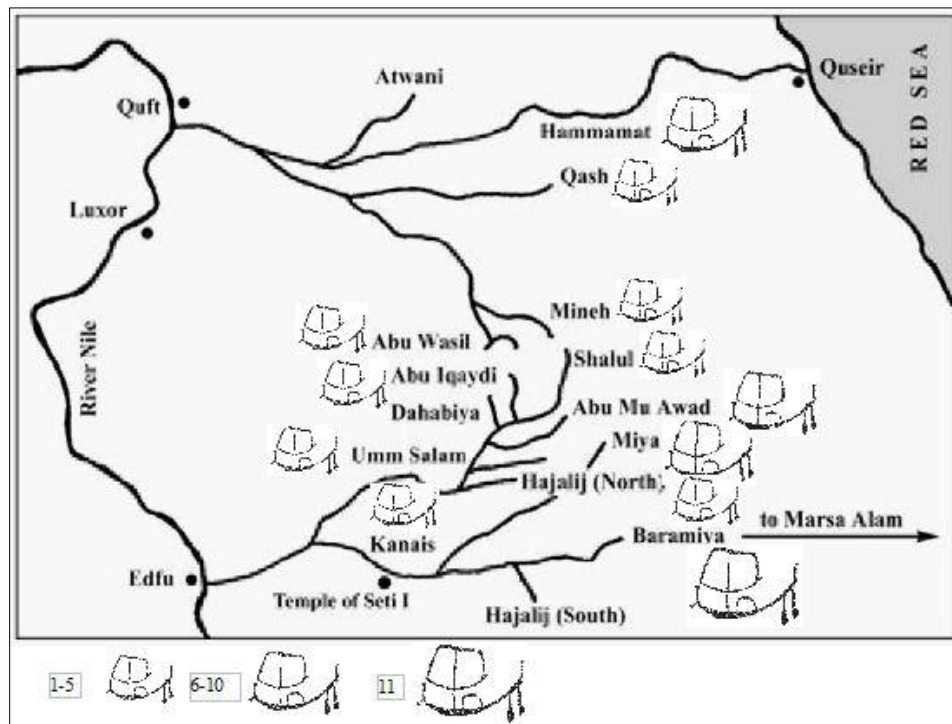
has the highest number of oared boats, although this is from a small overall total. Oars are generally rare in the southernmost wadis, but Wadis Abu Mu Awad and Abu Wasil have significant numbers among the small overall total. Depictions of oars are as rare in the northern wadis as in the southern ones (Map 6.2).



Map 6.2. Distribution of boats with oars

6.3.3 Sail and/or Mast

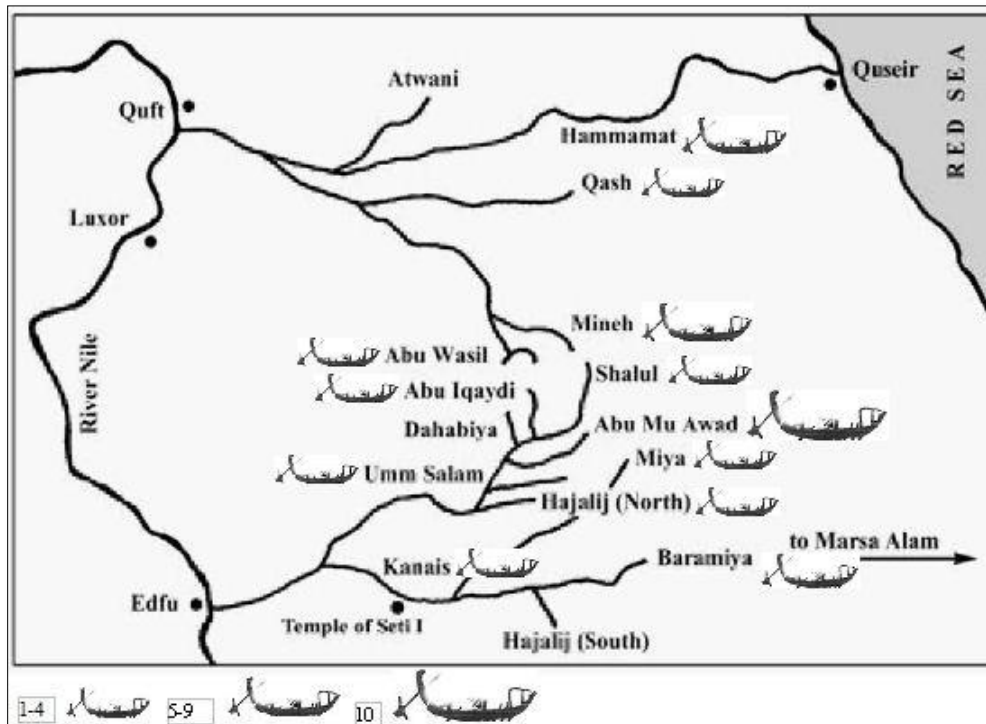
Only 61 boat images in the Central Eastern Desert possess a sail or mast (7%). Sickle boats are most often shown with a sail or a mast, since 46 (75%) of the total are in this category. But they still comprise less than 15% of the number of sickle-shaped vessels. No incurved sickle, incurved square or flared boat has a mast or sail and only half a dozen square boats do. It is clear that a method of propulsion is not commonly portrayed. If we add the percentage of boats with a mast or a sail to those with oars, the result is a figure of only 100 (11%) of the boats shown with an evident means of propulsion (6 having both a sail and oars). The highest numbers of examples in a small total are located in Wadis Baramiya, Abu Mu Awad, and Hammamat, while there are none at all in the two peripheral wadis Hajaliy (S) and Atwani (Map 6.3).



Map 6.3. Distribution of boats with a mast/sail

6.3.4 Steering Oar

Steering oars are present in only 5% of the boats. They are usually a feature on sickle boats, often in association with a mast or sail. They are rarely also found on incurved sickle and square boats, but never on incurved square and flared vessels. Thus, they are a very rare feature and only significantly associated with one type of boat, in that 80% of steering oars are found on sickle boats. Wadis Abu Mu Awad and Hammamat stand out as having significant numbers of vessels with steering oars, albeit in another small total. The two wadis on the periphery of the survey area, Hajalij (S) and Atwani again have none. 21 of the 47 vessels with a steering oar have triangular blades, a New Kingdom marker, and are a feature of Wadis Hammamat, Abu Mu Awad and Baramiya (Map 6.4)

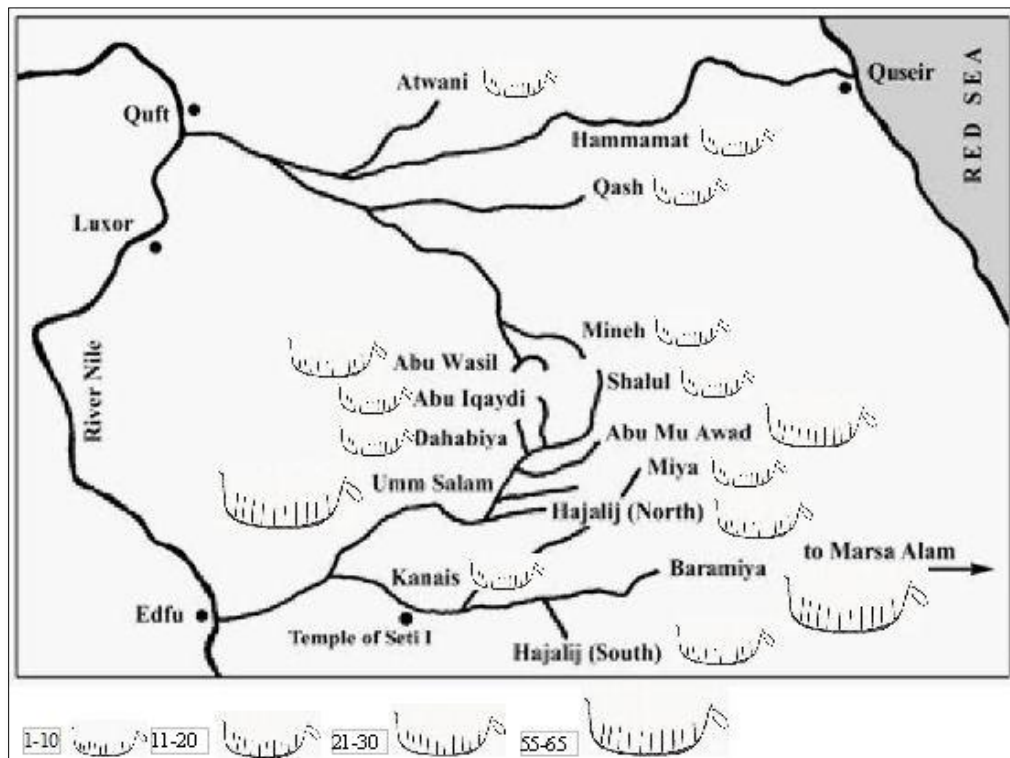


Map 6.4. Distribution of boats with steering oar

6.4 Boats with Additional Features: Human Involvement

6.4.1 Crew

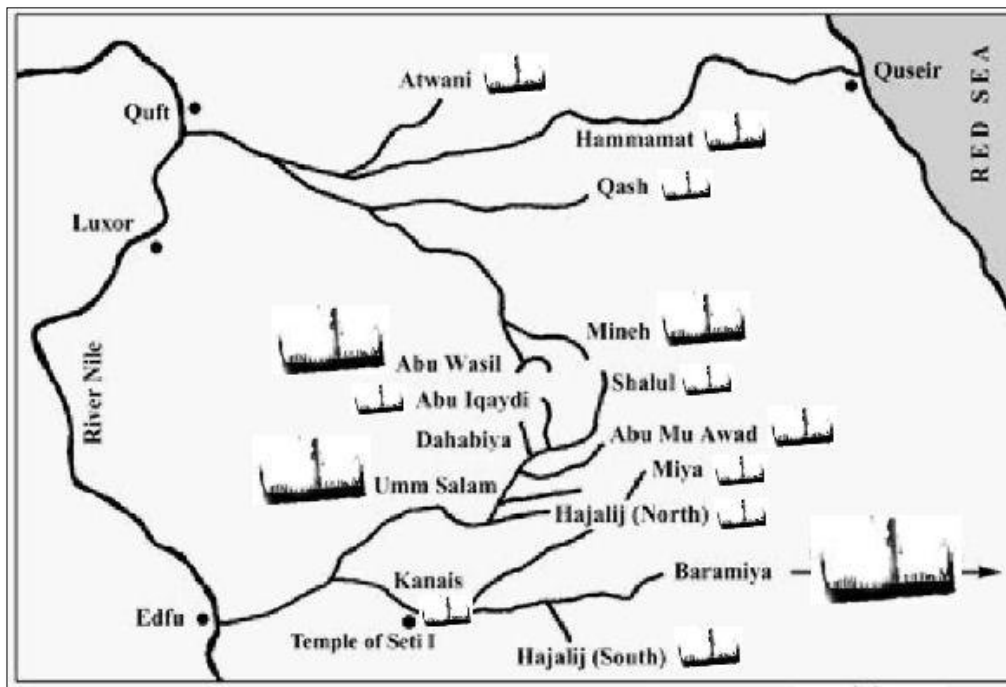
The most numerous feature added to a basic hull is the depiction of crew. But only a quarter (26%) of vessels overall are shown as crewed, square boats with crew outnumbering sickle boats by nearly 2:1. Over three-quarters of Flared boats have a crew, (77%) while about a quarter of sickle and square boats, 20% of incurved square boats, and only just over 10% of incurved sickle boats are crewed. The petroglyph creators appear to have been quite uninterested in realistic portrayal, as the crew invariably lack detail and are always shown as simple short single lines above the deck line. Indeed, there are two examples in Wadi Abu Wasil where figures dragging a boat are portrayed in far more detail than how crew are shown in the survey area. Wadis Baramiya and Umm Salam, which have the highest number of boat images also have the highest number of boats with crew, while the incidence of crew is lower as one moves north (Map 6.5). Within this pattern, for a wadi with a considerable number of boats, Mineh has fewer examples of crew.



Map 6.5. Distribution of boats with crew

6.4.2 One Large Human Figure

Large figures, invariably described in the EDS and RATS publications as ‘chieftains,’ form a rather small proportion of the additions to the basic hull drawing as just 15% of all boats are shown with one large figure. However, as will be examined in Chapter Eight, their role is extremely prominent-especially in the early dated scenes. Only the incurved square boats are relatively often (45%) depicted with a large central figure, but it is clear that square boats have more examples than sickle boats by a ratio which comfortably exceeds 2:1. One large figure in a boat is well represented in the four wadis which have the largest number of boat petroglyphs (and early examples), Wadis Baramiya, Umm Salam, Abu Wasil and Mineh and is not very common elsewhere (Map 6.6). There is a strong association between boats with one or more figures and hunting scenes. In all but two cases where boats are associated with, or integrated into, these scenes there is one on board.

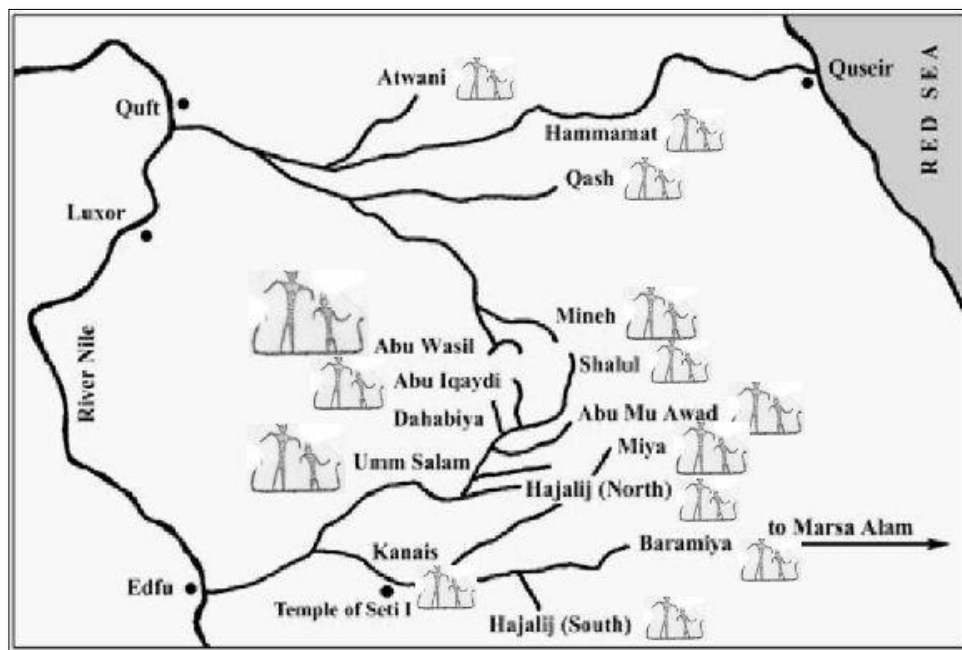


1-5
6-10
11-15
16-20
38
Map 6.6.
Distributi
on of
boats with

one large figure

6.4.3 Two or More Large Human Figures

Two or more large figures on deck are not a common feature, being present on less than 5% of boat images, but are a feature of square boats (60% of the figures total). Indeed, all ‘Square’ types together comprise 80% of boats with more than one figure. They are a particular feature of Wadi Abu Wasil and slightly to a lesser extent in Umm Salam, and are distributed evenly in the rest of the wadi system (Map 6.7).



1-5
6-10
11-15
16
Map 6.7. Distribution of boats with 2+ large figures

6.4.4 Dragged Boats

While scenes of boats being dragged or towed were featured prominently in the publication of the Eastern Desert Survey (Rohl, 2000), dragging scenes are relatively rare. There are only 40 (4.5%) examples of boats being dragged out of a total of 833 identified boat petroglyphs. When those with a possible tow rope, but no figures shown, are added, this number increases to 60 (7%). As with the representation of a crew, most of the draggers are indicated merely as stick figures or lines, lacking any anatomically recognizable features (Figure 6.2). However, at a few sites, notably in Wadi Abu Wasil, (WAS-10/DR-2/RME-26) the figures have heads, arms, and hair or perhaps even beards. Only one boat has an ‘arms raised’ figure on board, the same example in Wadi Wasil at WAS-10. There is another dragged boat on the main face at this site, these two being the only examples in Wadi Abu Wasil, another feature marking this out as a special site. Extremely unusually, the figures pulling on the dragging rope on both surfaces are well-delineated, a departure from the usual depiction of the draggers with simple small strokes (Figure 6.3). The two boats here and one at BAR-10 are the only three examples in the survey area where the images of the draggers are remotely realistic. One of the dragging figures may wear a plume. Moreover, a twin-plumed figure holds a line leading to the stern of the boat. This combination is a unique feature of both the Eastern Desert and the Nile Valley.



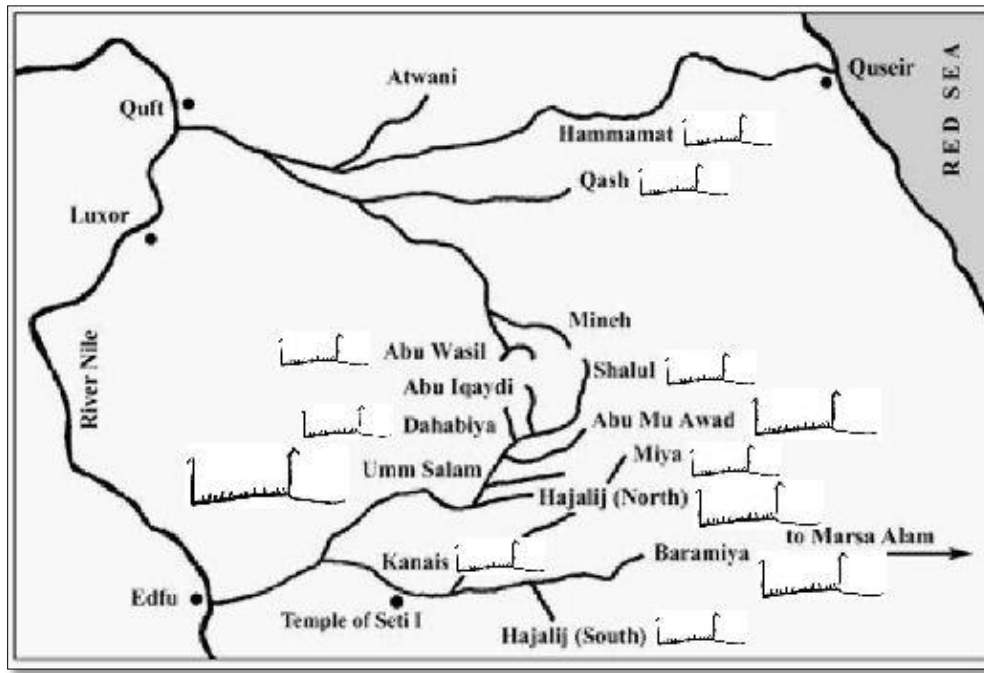
Figure 6.2. Boat dragged by five ‘figures’ typical of boat dragging scenes, MUA-1, author’s photo



Figure 6.3. Boat being dragged by at least four figures, WAS-10 (RME-26), Winkler archive, photo courtesy Egypt Exploration Society

Boats potentially being dragged are overwhelmingly a feature of the southern wadis, as 44 (78.5%) are located there (Map 6.8). No southern wadis are without at least one example, although there is only one in Wadi Kanais where ‘frond’ boats are concentrated. The two predominant boat wadis, Baramiya and Umm Salam, have 12 and 10 examples respectively. But Hajalij (N) has 10 and Abu Mu Awad 7. Central wadis have only 6 examples, and there are none in Abu Iqaydi and Mineh, while in the northern zone there are also 6, with none in Wadi Atwani. In addition, there are two examples of dragged boats in the side Wadi Dahabiya, which is not on any recognized route through the survey area. These boats have both crew and cabins. Indeed, dragged boats have far more instances of crew (60%) than boats generally (26%). The vast majority of dragged boats are square hulled and a majority has some limited association with animals and people, although only at HAJ-1, HAJ-3, perhaps HAJ-8, BAR-9, WAS-10 and QAS-3 are they in the heavily detailed ‘Integrated’ scenes. Most of the Abu Mu Awad examples do not possess context, with one which does at MUA-15 only having one Triangular figure and a dog beneath it.

Generally, those dragged boats without context are found at sites which are judged to be ‘Late’ by other dateable images at these sites, whereas those with associated animals and human figures are found at sites deemed to be ‘Predynastic.’ This follows the pattern in the Central Eastern Desert rock-art that predynastic boats are usually present in groups and associated with animals and people, often engaged in hunting. On the other hand, pharaonic boats almost invariably appear in ones or two’s. However, with the exceptions of BAR-9, HAJ-1 and 3, WAS-10 and QAS-3, (which are ‘Integrated’ sites) many of the dragged vessels are not integrated or closely associated with other images.



Map 6.8. Distribution of boats with a tow line and/or being dragged

	All	Square	Sickle	Flared	Incurved square	Incurved sickle
Total	884 (834)	416 (49%)	295 (35.5%)	44 (5.5%)	40 (5%)	40 (5%)
Cabin	136 15%	43 5/31/10%	52 6/38/17%	5 0.5/3/11%	13 1/9/34%	10 1/9/25%
Oars	49 6%	21 2/43/5%	16 2/32/5%	3 0.3/6/7%	6 0.6/12/16%	1 0.1/2/2%
Steering oar	47 5%	7 1/15/2%	38 4/81/13%	0	0	2 0.2/4/5%
Mast/ sail	59 6%	9 1/16/2%	44 4/80/15%	0	0	0
Crew	240 26%	126 14/59/30%	68 8/32/23%	34 4/16/77%	5 0.5/2/13%	7 0.8/3/18%
1 figure	136 15%	72 8/54/17%	31 3/23/10%	6 0.6/4/13%	16 2/11/42%	7 1/5/20%
2+ figures	37 4%	23 2.5/62/5%	6 0.5/16/2	3 0.3/8/7%	1 0.1/3/12%	3 0.3/8/8

Table 6.2: Boat petroglyphs in the Central Eastern Desert by type and feature: (834 boats identified).

Percentages: a) % of all boats b) % of individual boat type c) % of 'Sickle' or 'Square' types

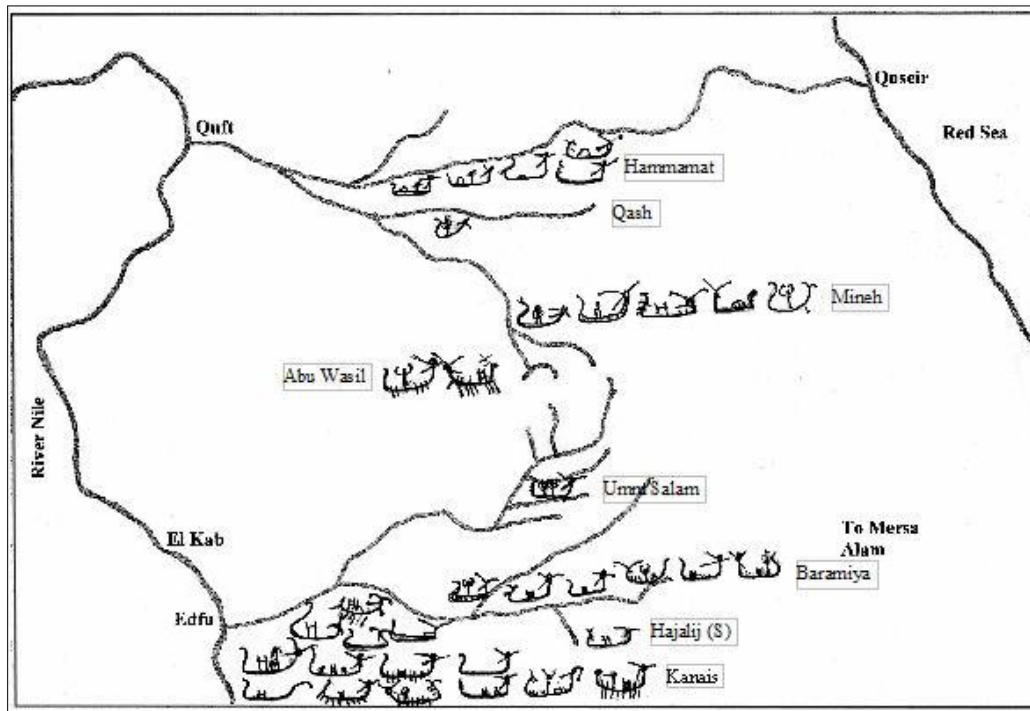
6.5 The Dates of the Boat Images

Since nearly 50% of the Central Eastern Desert boat petroglyphs are simply hulls, even distinctive motifs such as the probably Naqada I/early Naqada II incurved design, and the recognizably Naqada II c/d and III motifs, are rare. Therefore, dating the vast majority of the Eastern Desert corpus is problematic. Given that scientific dating is not possible, the approach taken here will be to identify ‘compositions.’ These are sets of associated and related images in terms of style, subject, superimposition and patination. The starting point will be identifiable and approximately dateable elements such as the pharaonic designs from Nile Valley tombs’ depictions of boats (see Chapter Two 3.2). The Ashmolean clay box, Gebelein Linen, C-Ware and D-ware pottery with their boat representations and ‘arms raised’ figures provide markers of predynastic elements. Sites are classified regarding boat petroglyphs as ‘Predynastic (P),’ ‘Possibly Predynastic (PP),’ ‘Dynastic/Late (L),’ and ‘Unidentified (U).’

6.5.1 Boats Dated by Reference to Known Motifs

6.5.1.1 ‘FronD’ Boats

The number of incurved ‘frond boat’ petroglyphs in the Nile Valley related to the drawing in the Ashmolean Museum, and at the same time stylistically comparable to the petroglyphs in the Eastern Desert, is very small. There is one petroglyph from El Hosh (Winkler, 1938), one near Silsila (Červíček 1974: Abb. 244), six at HK 61 at Hierakonpolis (Berger 1992: 108) and at least one from west of Thebes (Darnell, 2011: 1157), but no others are apparent from anywhere else in the Nile Valley. They are entirely absent from El Kab, which is on the eastern bank of the Nile adjacent to the survey area and one of the entry points into the desert. In the Central Eastern Desert, however, there are 34 (Map 6.9); in addition to at least four south of Baramiya (Judd, 2009, photos: C. Hanson), making a total of 43 in Upper Egypt; of which only nine are near the Nile Valley. The single Silsila example marks the southernmost distribution of this particular motif. Hitherto this petroglyph was an isolated example of the ‘frond boat,’ but since Silsila is opposite the Kom Ombo drainage basin, where more predynastic petroglyph sites have been located by the EDS survey teams but largely remain unpublished, its presence is not surprising. It stands in a similar relationship as those at HK61 to the Central Eastern Desert examples.



Map 6.9. Distribution of 'frond' boats in the Central Eastern Desert

Among the nearly 900 boat petroglyphs in the Central Eastern Desert, a very small number are of the incurved type with an S-shaped prow and two or three 'fronds' (Figure 6.4). 56% (19) are located in Wadi Kanais and Wadi Baramiya, which constitute essentially the same wadi, and over 40% (41%) at Kanais alone. Adding the two further examples at HAJ-2 and MIY-1 means that 21 (62%) are located in this area. There are also one in Umm Salam, two in Wadi Abu Wasil, and five in Wadis Mineh and Hammamat. None are known in the centrally located Wadis Shalul and Iqaydi, nor in the southern Wadis Umm Hajali (North) and Wadi Abu Mu Awad. The balance between the south and the north is thus nearly 2:1. This boat type seems to be particularly associated with petroglyph creators traveling on the main east-west routes. Thus, approximately 5% of the boat petroglyphs in the Eastern Desert could belong to this distinct type. The boat petroglyphs at HK 61 in Hierakonpolis are found in contexts attributed to the Naqada I Period (Berger, 1992: 108). Also, the box in the Ashmolean Museum is of late Naqada I or early Naqada II date. It is not exactly similar to the petroglyph examples in that it only has two 'fronds,' not three. But there are examples of related boats with two 'fronds,' including examples from Kanais where two and three 'frond' boats are evidently contemporaneous. The evidence is admittedly thin, but combined with the lack of such a boat style on D-Ware vessels and of continuation of the 'arms raised' figure

after Naqada II, it is possible to date this boat type from the late Naqada I through to the early Naqada II Period.



Figure 6.4. 'Fronde' boat, Morrow & Morrow, 2002: 156

6.5.1.2 'D-Ware' Boats

There are only nine clear examples of the typical 'Type I' Naqada II sickle hulled boat in the Central Eastern Desert survey area, although Červiček (1974, abb. 228) has an additional three from Wadi Sharab. This constitutes a route from El Kab, where Huyge (1995) located Naqada II sickle boat images, to Wadi Kanais and the main east-west route of Wadi Baramiya. Four of these have 'standards,' two of the type often associated with 'Min's thunderbolt' (Figure 6.5). One has a standard comparable with another representation found on D-Ware pottery; the other has no parallel on D-Ware pottery. The Type I boat petroglyph is therefore very rare in the Eastern Desert. They are furthermore confined to only a few places, five are in Wadi Hammamat and three at one site in Wadi Baramiya, with one in Wadi Qash. Two representations in Wadi Hammamat resemble boats in the painting in Tomb 100 at Hierakonpolis; another (at HAM-5) is the sole painted petroglyph in the Eastern Desert and also has a strong resemblance to boats in Tomb 100. This type is clearly present only on routes from the Nile Valley to mines or quarries in the desert, or to the Red Sea coast. One complicating factor is that although there were many sickle boats in the survey area, a large number of them comprise only a simple crescent and lack further detail, which makes them impossible to classify further.

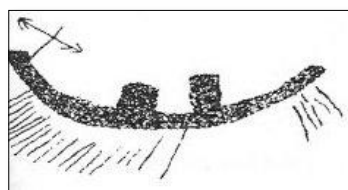


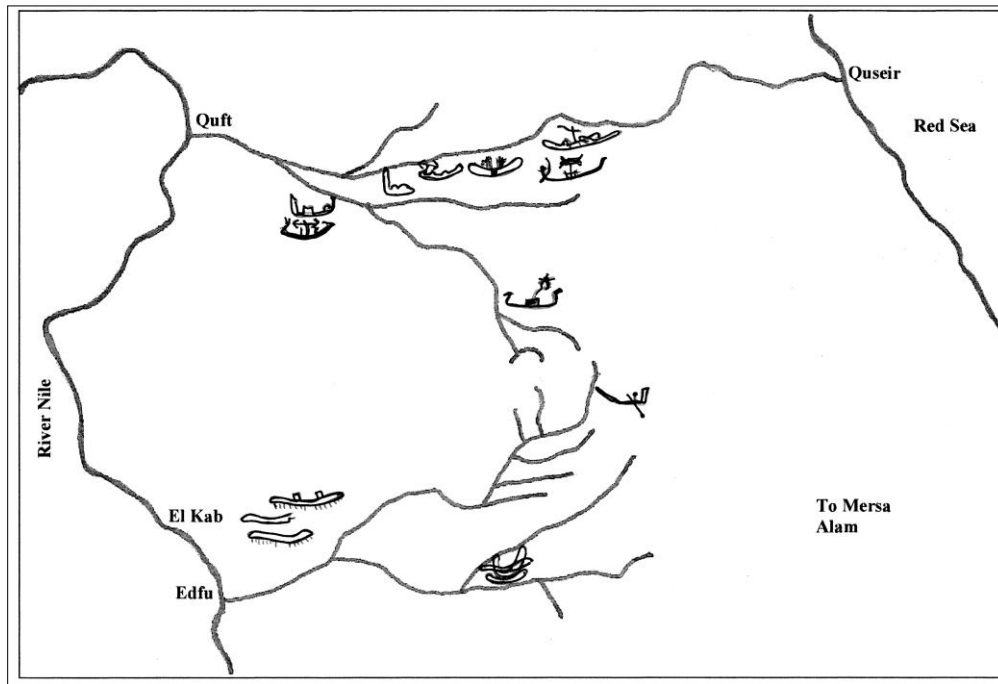
Figure 6.5. Sickle boat with 'Min standard,' Wadi Qash, Winkler, 1938

6.5.1.3 Naqada III Boats

In the Central Eastern Desert there are only three examples of boat petroglyphs dated to the Naqada III Period, two with the typical triangular stern (SHA-14 and QAS-2) and one without (MIN-14). The latter clearly has a falcon sitting on top of the prow (Figure 6.6), in the horizontally perched position which is typical of representations of falcons before the second half of the First Dynasty (ca.3050-2860 BCE). All these three examples are in the central/northern part of the Eastern Desert (Map 6.10). Another has been recorded in Wadi Midriq, south of Wadi Baramiya. There is thus an obvious decline in the number of relatively easily dateable boat drawings in the petroglyph corpus as we progress in time through the successive Naqada periods, from 34 (Naqada I), to 9 (Naqada II), to 4 (Naqada III, Map 10). This only applies, however, to distinctive and quite readily identifiable boat types. In the Naqada III Period there are sickle-shaped boats in mobiliary art, including an example on a tag from the reign of King Djer (2939-2893 BCE). This shows a line running from one up-curved end of the boat to the deck and could represent a rope or strut fastening intended to strengthen one end of a boat primarily made of papyrus (Vinson 1970: 199). This is the only known example of such a feature. Altogether, only 47 boat petroglyphs in the Central Eastern Desert, out of nearly 900, can be readily identified by stylistic comparison with predynastic artifacts from the Nile Valley.



Figure 6.6. Naqada III, probably Early Dynastic, boat with falcon on prow, MIN-14 (RME-24b), author's photo



Map 6.10. Distribution of Naqada II c/d and Naqada III boat petroglyphs in the Central Eastern Desert, Naqada II: 12, Naqada III: 3

6.5.1.4 Pharaonic Boats

The main defining characteristic of Pharaonic period boats is that they have a central mast with or without sail. There are 59 examples of boat petroglyphs with a central mast/sail in the current Central Eastern Desert corpus. To the 59 boat petroglyphs with a mast, 13 drawings of boats with triangular-bladed steering oars, but without a mast or a sail, should be added. Steering oars are sometimes present on predynastic drawings; therefore the mere presence of one is not necessarily diagnostic of a late date. Moreover, a double steering oar with leaf-like blades is only present at three sites (MUA-22, HAM-1 and HAM-13). This makes the definitely identifiable number of evidently dynastic vessels 75, plus a further 4 which can be compared with Nile Valley tomb paintings. If they were connected to people actually using these vessels, these might be expected along the transverse routes from the Nile to the Red Sea. However, only 29 (32 including those dated by association) of these boat petroglyphs, are in Wadi Hammamat and Wadis Kanais/Baramiya, which are direct routes to the Red Sea.

6.5.1.5 Boats Dateable by Nile Valley Motifs

Adding the previously identified Predynastic boat drawings, a total of 128 boats are directly comparable with dateable Nile Valley images motifs, only 14.5% of all identifiable boat petroglyphs in the Central Eastern Desert. We can compare this to the presence of features

such as a mast, a sail, and steering oars, especially those with triangular blades, in the catalogues of Lower Nubian and Upper Egyptian boat petroglyphs. Boat representations with sail, mast (usually centrally situated), double steering oars or triangular steering oars range from 20% at El Kab (Huyge, 1995) and 22% in Sayala (Engelmayer, 1965) to 30-50% in Lower Nubia (Dunbar 1941; Almagro Basch and Almagro Gorbea 1968; Hellström and Langballe 1970; Otto and Buschendorf-Otto 1993; Váhala and Červíček 1999). The average in the Nile Valley is 38%, compared to 8% in the Central Eastern Desert, indicating that, at least as far as drawings of boats are concerned, the petroglyphs in the Central Eastern Desert are much less likely to date to the pharaonic period than those in the Nile Valley.

6.5.1.6 Boats Dated by Association

Nearly half of the Central Eastern Desert boat petroglyphs simply display hulls. Distinctive motifs as discussed above, such as the probably late Naqada I/early Naqada II incurved design, the sickle-shaped 'Type I' on D-Ware pottery, and the recognizably Naqada III vessels, are rare. Many boat petroglyphs are located without accompanying animal or human images or, when present, without providing useful information. Therefore, dating much of the Central Eastern Desert corpus is problematic and a significant proportion of sites with boat petroglyphs (27%) cannot be assigned a secure date. Even at those sites where some boats can be dated, often a considerable number cannot be dated. Many sites consist of a rock face and several boulders with images on each. Just because an image on one face can be dated does not mean others on separate surfaces are related. This accounts for the ability to date only 49.5% (439) boat images, whereas 73% of sites overall can be given a date. By identifying compositions, scenes which are contemporaneous, and using dateable images within them to date the remainder, another 327 boats can be assigned a date: 14 dynastic and 297 predynastic.

6.6 Distribution

6.6.1 General Distribution

In number, boat images follow the general pattern of petroglyph distribution in the Central Eastern Desert in that the southern wadis have a somewhat higher percentage of the images (60% as against 52.5% of the sites in that area) and the central wadis are under-represented (24% as against 32.5% of sites; Table 2, Appendix Four). In the south Wadi Umm Salam stands out as having the largest number of sites (46) and boats (168) with 19% of boat sites.

Wadis Kanais/Baramiya together (43 sites) have just more (178) and these and Umm Salam are major boat areas. Umm Salam stands out in that it is a 'route to nowhere,' neither to the mines nor to the Red Sea. In the south both Wadis Abu Mu Awad and Umm Hajalij (N) have significant numbers of boats, while in the southernmost area, Hajalij (S) stands out with its large number of boats at only two sites. Neither of these wadis are direct routes to the Red Sea either.

Boat petroglyphs are rarer in the core central Wadis Abu Iqaydi and Shalul. Indeed, there are only 24 in these two wadis combined. Moreover, within the central area as a whole the two north-central Wadis Mineh and Abu Wasil have an overwhelming majority of the central area's boat petroglyphs: 159 boats out of 203 in the central area (78%). By contrast, the two core central wadis have significantly fewer boat image percentages than their share of sites, only 4% between them, and have boat petroglyphs at less than 60% of sites in each wadi. Again, it is these central wadis which have fewer petroglyphs than the other areas of the wadi system, supporting the contention that there is a north-south division. In contrast, the northern wadis are proportionately represented with 15% of boats against 15% of wadis in the survey area. In this area one site, QAS-3, stands out as having nearly all the boat images in Wadi Qash, while boat sites are more evenly distributed in the other northern wadis, Hammamat and Atwani. Wadi Hammamat has 69, less than half the number of boats in Kanais/ Baramiya or Umm Salam. This is notable, given that it was a major route to the Red Sea in the pharaonic and Greco-Roman periods, that the Hammamat quarries were an important source of raw materials, and that carnelian and sea shells have been found in graves since the Badarian period. Wadi Atwani has few boats and these are concentrated at a small number of sites.

6.6.2 Distribution of Each Type

Regarding boat types there are more 'Square' (Square + Incurved Square + Flared) boats than 'Sickle' (Sickle + Incurved Sickle) ones by a ratio of 6:4. Square images alone make up 50% of identified boat petroglyphs. Regionally, there is over-representation of Sickle boats in the northern wadis and significant under-representation in the central ones. 'Square' boats are much less common in the northern wadis, where there are fewer 'Square' than 'Sickle' boats. 'Square' boats outnumber sickle by 2:1 in Wadis Baramiya and Umm Salam. Moving north, in Abu Mu Awad and the central Wadis Iqaydi and Shalul there is more of a balance between the two types. However, in the north-central wadis Mineh and Abu Wasil 'Square' types

predominate again, overwhelmingly so in Abu Wasil. By contrast, Wadi Hammamat in the northern zone has nearly twice as many 'Sickle' boats as 'Square' ones, while in Wadis Qash and Atwani they are approximately in balance.

With regard to the 'Incurved' and Flared types of boat petroglyphs, the Incurved Sickle type is over-represented in the northern wadis, and there are few Incurved Square and Flared types there. Indeed, one site in the northern Wadi Qash has 26% of the examples of the Incurved Sickle type. Incurved Square boat motifs are more evenly distributed. They are a feature of two north central wadis: Abu Wasil, and especially Wadi Mineh, which has 18% of the boat images as against 12% of the total of sites in the survey area. They are also present significantly in the southern Wadi Kanais (8-21%) and the extension of this wadi, Baramiya (6-16%). What is in effect one southern wadi has 40% of the incurved square boat petroglyphs, as well as 20% of the incurved sickle examples. Many of the boats with incurved hulls also have the two or three 'frond' decoration and are associated with an 'arms raised' figure, marking a predynastic date. 'Frond' boats, which are always incurved, at 34 out of 82 make up less than half of the two incurved types. Flared boats are clearly a southern phenomenon since 95.5% of them are located there. Regarding this type, Wadi Umm Salam has half of the total. Adding those in the Wadi Baramiya, these two wadis together have 70% of 'Flared' boats, and 35 of the 'Flared' images are in the southern part of the survey area.

6.7. Distribution of Dated Boats

6.7.1 Southern Wadis

Dateable predynastic images outnumber pharaonic/late ones by 3.5:1 but the sites and boat petroglyphs identified as 'Predynastic' or 'Probably Predynastic' are not evenly distributed. 88 petroglyphs (25.5%) of the 345 are in Wadi Kanais and Wadi Baramiya, which together basically constitute a single valley, and 75 (22%) are in Wadi Umm Salam. The boat representations in this wadi are overwhelmingly early by a ratio of nearly 10:1, although this figure is affected by the considerable number of boat sites which are probably rather than definitely predynastic. If MIY-1 at the junction of Wadis Baramiya and Miya and the two nearby sites in Umm Hajalij (South) are incorporated with these two wadis and Wadi Kanais, 138 or 41% of the early boat petroglyphs are in this restricted area. Taking the southern wadis as whole, predynastic boats outnumber late ones 248:49, a ratio of 5:1. 72.5% of dated predynastic boats are in the southern wadis, while the pharaonic boat images are more evenly spread through the areas nearly proportionally to their percentage of sites. It should be noted

that not all the southern, east-west wadis have a significant number of predynastic petroglyphs. Wadi Abu Mu Awad has only 2 predynastic boat sites, but 7 sites at which clearly Pharaonic and later boat drawings are dominant. Indeed, this valley has the highest number of boat sites not identified as predynastic, together with Wadi Baramiya, in the whole of the Central Eastern Desert.

6.7.2 Central Wadis & Northern Wadis

In the central wadis overall predynastic boats outnumber late examples 61:27, a ratio of 2:1. However, the central Wadis Abu Iqaydi, Wadi Dahabiya and Wadi Shalul have only 5 ‘Predynastic’/ ‘Probably Predynastic’ sites and half a dozen (1.5%) early boats between them. In these wadis late boats outnumber predynastic ones 2:1. This provides further evidence that there is a north-south divide in the petroglyph corpus. The northern central Wadis Mineh and Abu Wasil, however, do have a significant number of ‘Predynastic’ and ‘Probably Predynastic’ sites, 7 and 9 respectively, and there are 55 (16%) predynastic boat petroglyphs in these two wadis. Thus, overall predynastic vessels outnumber late boats by 2:1. In the north, Wadi Hammamat has 4 predynastic sites (and 2 mixed), but only 15 (4%) early boat petroglyphs, for an average of around two per site. This compares with Wadis Kanais and Baramiya, which combined have 16 (and 2 Mixed) sites with 87 predynastic boat petroglyphs, for an average of 5 per site. Thus, the southern route to the gold mines and the Red Sea has far more petroglyph activity than the northern one. Many of the Wadi Qash petroglyphs cannot be dated due to lack of context, and there are no pharaonic boats at all in Atwani, so this may affect the result that predynastic boats are in the majority by 2:1.

<i>Wadi</i>	Predynastic sites	Probably Predynastic sites	Pharaonic and later sites	Mixed Sites	Unidentified sites	Boat Sites	% of Sites in Wadi	Predynastic boats	Pharaonic and later boats
Umm Hajalij (S)	2	0	0	0	0	2	100	39	0
Kanais	2	0	1	0	0	3	75	22	1
Baramiya	5	7	7	3	7	30	77	66	16

Miya	1	0	1	0	2	4	57	12	8
Umm Hajalij (N)	1	1	3	1	3	9	100	32	4
Umm Salam	5	14	4	2	17	39	85	75	8
Abu Mu Awad	1	1	7	0	8	17	77	3	14
Abu Iqaydi	0	2	4	0	4	8	53	2	10
Dahabiya	1	0	0	1	0	2	100	2	0
Shalul	1	0	3	0	3	8	57	2	6
Abu Wasil	5	4	8	0	6	23	88	25	8
Mineh	3	4	3	3	6	19	76	30	5
Qash	0	0	1	1	0	2	33	5	3
Hammamat	2	1	5	2	5	14	73	15	12
Atwani	2	2	0	0	5	8	61	14	0
Total	31	36	47	12	67	188	(75)	344	95

Table 6.3. Number of sites and dateable boat petroglyphs of different periods per wadi in the survey area-Total: 439

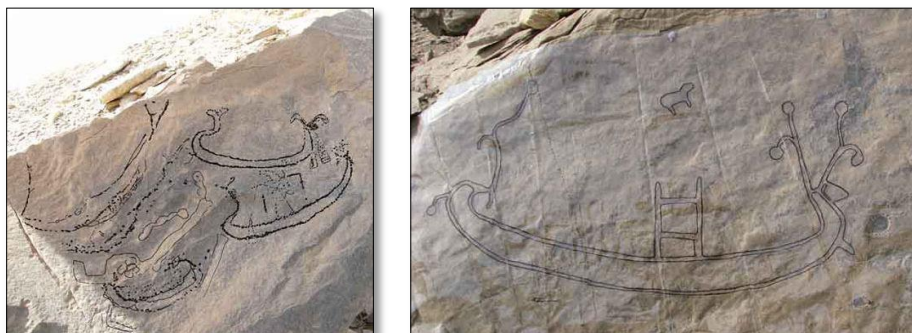
6.8 Discussion

6.8.1 Concentrations of Boats

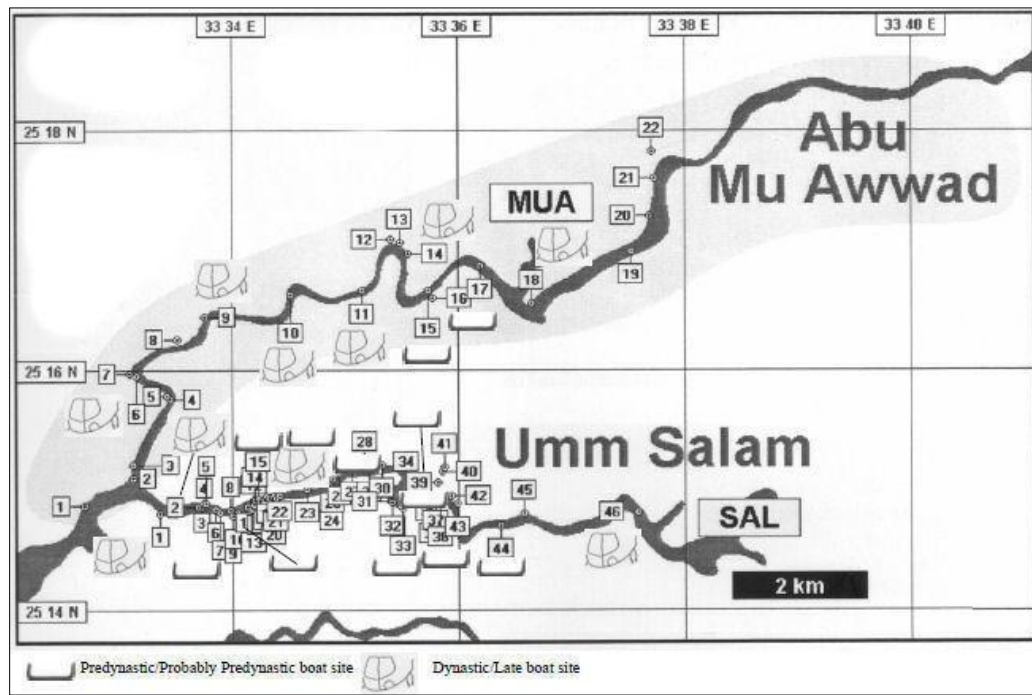
There are three main concentrations of boats in the survey area. The first is the ‘southernmost core’ consisting of Wadis Kanais/Baramiya, Hajalij (S), with the addition of site MIY-1. The second and third areas are the Wadis Umm Salam and Umm Hajalij (N), and Wadis Mineh and Abu Wasil respectively. The first area contains 231 boats (26% of the total), in which identified predynastic images outnumber pharaonic ones by 7:1. It is also notable for its ‘frond’ boats, of which there is at least one example in each wadi. Significant numbers are located in Wadis Kanais and Baramiya, and a notable concentration in the former on the cliff face behind what is now the portico of the Seti I temple at Bir Kanais. The presence of a major proportion of the ‘frond’ boats in a limited area can probably be linked with Hierakonpolis and its examples of boats with two or three ‘fronds’ (Figures 6.7 & 6.8). Hierakonpolis is a little north-west of being opposite to Wadi Abbad, which is essentially the beginning of Wadis Kanais/Baramiya. While it is on the western bank of the Nile, there was no important population centre immediately opposite on the west bank in the Predynastic since Edfu became important only in the Old Kingdom (although the current Tel Edfu mission will hopefully shed more light on this). The lack of any ‘frond’ boats at El Kab,

which is on the west bank and constitutes an entry point in to the Central Eastern Desert, provides additional evidence that these boats are earlier than Naqada II. Huyge (2002: 197) reports no Naqada I boat petroglyphs there, suggesting that one significant group of the predynastic petroglyph creators in the southern core wadis came from Hierakonpolis. Although petroglyphs on a rock surface are not necessarily associated with archaeological remains beneath it, the Hierakonpolis boat petroglyphs are in the Naqada I area of the site (Hardtke, 2009).

There is a second major concentration of boats, particularly predynastic ones, in the two parallel wadis Umm Hajalij (N) and Umm Salam where predynastic images outnumber pharaonic ones by 6 and 9:1 respectively. That there is only one, unique, ‘frond’ boat in this area and the considerable proportion of ‘Flared’ boats, suggests that a different group of people may have frequented this area from those who went into the southernmost wadis. Abu Mu Awad might be expected to have the same character as Umm Hajalij and Salam, since it is a short east-west wadi parallel to these two. But on the contrary, it is noted for its pharaonic boats and extremely low number of early images (Map 6.11). We cannot account for this by proximity to Wadi Shalul or by its progressing into it, since its opening is at the junction with Umm Salam; to the east from where Wadi Batur runs into Wadi Shalul. There must be some particular reason for its character, as it stands out as a ‘late’ wadi among overwhelmingly predynastic boat sites over the southern area. The presence of a number of pharaonic inscriptions (Rothe, 2008: 96) suggests that this wadi was used as a route to the mines in the Pharaonic Period, as it is not a direct route to the sea.



Left & Right: Figures 6.7 & 6.8. ‘Frond boats at Hierakonpolis, HK6, Hardtke, 2009



Map 6.11. Distribution of dated boat sites in Wadis Umm Salam & Abu Mu Awwad, after Morrow & Morrow, 2002: 97

The third area, both of a concentration of boats and in particular of predynastic images, lies in the north-central Wadis Abu Wasil and Mineh. With 159 boats and a predynastic to pharaonic ratio of 4:1 it shows a diminishing number of boats as we move northwards. Both these wadis were routes in a south-easterly direction to the Red Sea and the gold mines and this probably accounts for the less overwhelming majority of early boat images than in other routes well used in the Predynastic. However, there is still a significant predynastic presence, and 'frond boats are in evidence again, albeit only a small number and in slightly different style from those in the southernmost wadis which is their heartland. In this area Wadi Abu Wasil is notable for WAS-10/DR-2 with its plumed figures holding bows in front of the chest, a motif only in evidence in this wadi. It is also the site of the only dragged boat containing an 'arms raised' figure. There are just two of the detailed 'Integrated' scenes, compared to fourteen in the southern area, and one or two large figures standing in a boat are well represented in these wadis, as in Baramiya and Umm Salam. The character of Abu Wasil and Mineh in terms of boats is of a considerable predynastic presence, but given that the central core wadis are very dissimilar from them, they make up a sub-area of their own. This differs from the core central Wadis Abu Iqaydi and Shalul where boat representations are rare compared to the rest of the survey area. Also unusually, a majority of these are pharaonic. This is the only part of the Central Eastern Desert where this is the case.

The northern region has far fewer boats than the other areas and therefore contrasts with the three areas previously described. In addition, it is notable that the ratio of predynastic to pharaonic boats is 2:1 there. This continues the trend of a diminishing ratio between early and late images as one goes northwards. The lack of suitable rock surfaces in Wadi Qash, and the peripheral nature of Wadi El Atwani partly accounts for the lower number of boat images in this area. Wadi Atwani leads away from the main area of mining activity and routes into the desert and into a boulder field. Wadi Qash is wide and travelers unusually would not walk along the cliff edge, with several stopping points at rocky outcrops where shade can be found. However, this area contains the main route to the quarries and the Red Sea. Wadi Hammamat has no more boat images than the much shorter Umm Hajalij and Abu Mu Awad, despite running the whole length of the Central Eastern Desert from the Nile Valley at Quft to the Red Sea. Boats on the southern Kanais/Baramiya route to the Red Sea outnumber those in Wadi Hammamat by 2.5:1. Geography may partly account for this. North of Wadi Hammamat has a destination such as a mine, quarry or port along its length, but by comparison, Wadi Baramiya constitutes a junction north, south, east and west to mines, hunting grounds and the sea. South of Baramiya there are the Wadi Muweilhat mines, and judging by the petroglyphs there (Judd, 2009) hunting and herding were important there too. The area north-east of Wadi Hammamat was not a major quarrying destination until the Greco-Roman period.

6.8.2 The Additional Features of Boats

6.8.2.1 Propulsion

The vast majority of depictions of boats are not realistic pictures of vessels on the Nile. They do not depict the everyday activities of fishing, hunting, ferrying, transportation and trading which took place on the river. It is striking how few features there are which help to differentiate boat types. It is notable that the petroglyph creators were uninterested in depicting methods of propulsion, as in the early boats oars are extremely rare and a sail non-existent. Neither were they concerned to show rowers at the oar. There is not a single boat image where individual figures are detailed rowing. Although a sail was used from Naqada III, depictions of vessels with a mast, let alone with the addition of a sail, are rare. Either most boats were propelled by paddles, which because they were small and unattached to the vessel were considered too insignificant to be shown, or a ritual reason for them being

missing is possible. Given that many boats are travelling in the desert in the company of animals, it is clear that these scenes are not realistic in any case. Even a crew is not often indicated and three-quarters of the vessels appear to propel themselves. It is the boat itself, often present only as a hull, which is important.

6.8.2.2 Large Figures

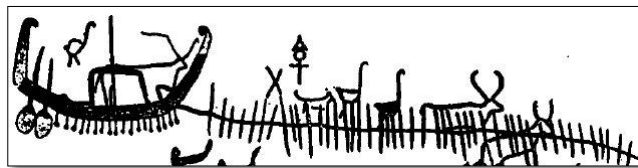
The presence of one or more large, usually central, figures is a feature in a fifth of boats overall and it is especially significant in the four wadis with the highest number of early boat images: Wadis Baramiya, Umm Salam, Abu Wasil and Mineh. Nearly half stand in boats where no crew is depicted. This is, however, the case in dynastic as well as predynastic boats; although the large figures are much more prevalent in early boats than in the few pharaonic examples. Authority figures, being more important than mere crew members, are shown in some detail, whereas in every case the crew is only indicated very simply. In predynastic scenes at the same site it is also common that some boats will have crew and others will not. Apart from Flared boats often having crew, there is no convention regarding their depiction. Many of the large figures also have plumes, and just under a third of those with plumes stand in a boat. Since many of the hunting figures wear plumes, there appears to be a connection between the personnel in a hunting scene in their dress, and regarding the association with, or integration into, hunting scenes by the close presence of a boat on the rock surface.

6.8.2.3 Dragged Boats

Boats in the rock-art which appear to be dragged or towed have attracted attention (Červíček: 1974/1992, Rohl: 2000, Wilkinson: 2003). They are heavily concentrated in the southern wadis and only one clearly pharaonic vessel at SAL-34 is portrayed with a tow line, suggesting that many are predynastic. However, dragged boats are well represented in the mainly late Wadi Abu Mu Awad. At predynastic sites they tend to be integrated into a scene with other images, while at late sites they have no such association. So in the former they are part of the meaning of these scenes. There are dragged boats in the Nile Valley, both arguably predynastic and pharaonic (Figures 6.9 & 6.10). What is surprising is that there are more examples of vessels being dragged in the Central Eastern Desert than there are in the Nile Valley. Moreover, the images of dragged boats are far into the desert, rather than near to obstacles to travel, such as the cataracts, where we might expect them to be located. In the

Predynastic they are also purely a desert rock-art phenomenon, as there are no examples on C or D-Ware pottery, palettes or knife handles.

It is unsurprising that such images should be located in the Nile Valley. Not only are there the un-navigable cataracts with their rocks, eddies and whirlpools to go around, but shallow waters, especially once the inundation had receded, would have been a barrier to river travel. Although the Nile appears as a barrier-free highway from Aswan to the Mediterranean, contrary winds when trying to go against the north-south current, or a dead calm (a regular occurrence), would have caused delays which could last weeks. To overcome this it was necessary to ‘track,’ for the crew to drag the boat from the riverbank. A small dahabiya in 1873 used by Amelia Edwards and her party required all nine crew in order to tow it (Graham, 2004: 41). In Figures 6.9 and 6.10 there are more than thirty figures, suggesting larger boats. In the Central Eastern Desert petroglyph scenes far fewer are involved. At BAR-9 where there is a large vessel with a crew of sixty-nine, it is dragged by just seven (stick) figures, (Figure 6.11) while the two at WAS-10 are towed by five. Only eight of the thirty-nine towed boats have the number of draggers in double figures. Two at HAJ (S)-1 have figures on ropes at both ends of the vessels, perhaps to ensure the vessel did not swing round in the wind. Therefore, the portrayal of dragging may show what occurred on the Nile, but realistic representation of the number of men required was not usually necessary. The presence of this activity in some predynastic scenes may be intended to show mastery of the powerful river by men.



Left: Figure 6.9. Dragged probably predynastic boat, Aswan, (drawing of draggers abbreviated) Murray & Myers, 1933: 129, Right: Figure 6.10. Dragged pharaonic boat, Almagro & Almagro, 1968: 179

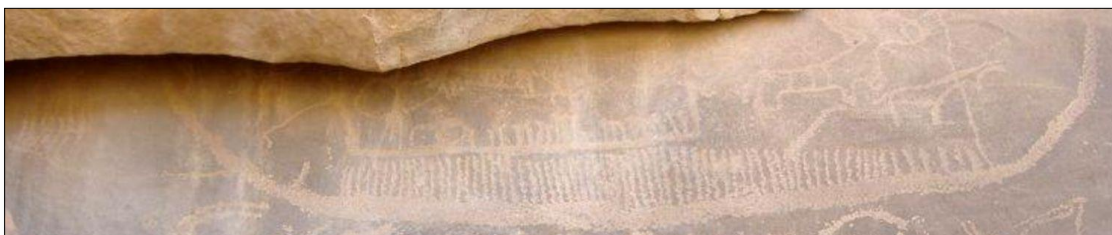


Figure 6.11. Large boat with many crew dragged by seven figures, BAR-9, author's photo

6.9 Comparison of Predynastic and Pharaonic Boats

On the one hand, a large majority of boats that can be identified as square-hulled or incurved are predynastic. On the other hand, all but only half a dozen of the pharaonic boat depictions are sickle-shaped. The wadis with high numbers of early boat petroglyphs: Baramiya, Umm Salam, Abu Wasil and Mineh also have the greatest number of large central figures, Abu Wasil in addition having the highest number of figures in boats wearing plumes. There are just 6 out of 92 pharaonic boats with a large central figure on board. Thus, they are clearly mainly a predynastic feature. Southern wadis Baramiya (54/22.5%) and Umm Salam (60/25%) also have the most examples of crew. Wadis Kanais, Baramiya, HAJ(S) and site MIY-1 combined have 82 (34%) between them. On the other hand, the north-central Wadis Abu Wasil and Mineh do not have considerable numbers of crewed boats, the former being most notable for its detailed large central figures.

Pharaonic vessel depictions have the highest representation in Wadis Baramiya, Abu Mu Awad and Hammamat, although in the latter there are still more predynastic (15) than late (12) boats. That the northern and southern direct routes to the gold mines and Red Sea should have significant numbers of pharaonic and later boats is not surprising. Abu Mu Awad, however, is not such a route. It has a concentration of pharaonic inscriptions and is assessed by Rothe as a significant route to the New Kingdom gold mines in that area, with one inscription of “the scribe who counts the gold” (Rothe, 2008: 96). Abu Mu Awad is probably a route to Wadi Dagbag, outside the sandstone and survey area to the east, and also a gold mining centre with a well.

In the ‘southern core’ Wadi Baramiya has 67 inscriptions, the highest in any wadi, and is a direct route into the heart of the Eastern Desert with the ability to turn to the north or south from before Bir Baramiya to the mineralized areas of the desert. There are also three inscriptions containing the title “ship’s captain,” perhaps unsurprising on a direct route to the Red Sea (Rothe, 2008: 404). Wadi Hammamat has pharaonic inscriptions, depictions of Min, cartouches and the many greywacke quarry inscriptions (Morrow & Morrow, 2002: 214-222). Thus, the presence of pharaonic boat petroglyphs is due to these wadis’ importance as routes to the mines and quarries. There are pharaonic boats depicted in every wadi except El Atwani and Umm Hajalij (S), including Umm Salam and Abu Wasil which contain many

predynastic images. It is likely that the latter wadi represents a route from the north to Bir Shalul and then to the gold mines, while the pharaonic boat sites in Umm Salam are mainly located near to the junction with Wadi Miya or at the opposite end where there is a cut through to Abu Mu Awad, not strung out along the whole length of the wadi as the predynastic sites are.

6.10 Comparison with Nile Valley Boat Images

The Nubian sites close to the Nile (and now mostly under Lake Nasser) mainly recorded in the 1960s UNESCO expeditions comprise 1,240 images and overwhelmingly contain examples of pharaonic boats (Dunbar, 1941; Engelmayer, 1965; Almagro & Almagro, 1968, Hellström, 1970, Otto & Otto, 1993; Huyge, 1995; Vahala, 1999). Because the survey publications often do not show context, dating is challenging, but there are certainly no ‘frond’ boats reported in them and also none which can be dated with any confidence to Naqada I-II a/b. Nearly every boat in the Nile Valley corpus is sickle-shaped apart from those dated to Naqada III, further support that square vessels in the desert are generally predynastic. A small number (29) are ‘Type I’ sickle-hulled Naqada II c/d vessels, but there are many more Naqada III boats with the ‘triangular’ stern (120+), with concentrations at Khor Madiq, Khor el Aquiba and especially at Sayala (Almagro & Almagro, 1968, Engelmayer, 1965). Pharaonic boats (339) outnumber Naqada II-III vessels in the Nile Valley by 4:1 and there are not many images earlier than Naqada III. Boats from this period straddle the late predynastic/early dynastic period. Pharaonic and Naqada III images together outnumber Naqada II examples 14:1. So images even near the date of most of the Central Eastern Desert boat petroglyphs are rare, and most of the few Naqada II vessels are at El Kab in Upper Egypt. Recent work in the area of the Rayayna desert behind Thebes and near Aswan also indicates petroglyphs from Naqada III (Darnell, 2009; Gatto, 2009).

6.11 Conclusion

A five-fold typology has been established consisting of two ‘Sickle’ variants: Sickle and Incurved Sickle, and three ‘Square’ ones: Square, Incurved Square and Flared. Boats of all shapes and sizes appear either alone, in groups or in association with other images. Therefore, although a function-based approach is attractive, it is not feasible to match a particular design of vessel to a particular task, either on the Nile, the sea or in ritual. Occasionally a pharaonic images may be identified as a cargo vessel or a barque shrine, but this is rare. The retention of

the Sickle/Square contrast, with the refinement of the presence or absence of features such as a means of propulsion, crew or a large figure, does allow differentiation between images and assists in dating.

The 'Square' types outnumber 'Sickle' examples by 6:4 and there are clear regional differences in distribution, with the former predominating in the south and the latter in the north. Incurved styles are found throughout the northern and southern areas, but particularly in the 'southern core' of Wadis Kanais/Baramiya, Hajalij (S) and MIY-1. They are notably rare in the core central wadis (Abu Iqaydi and Shalul). Flared boats are overwhelmingly a feature of the south. Half of all boat images are simple hulls, with crew on a quarter of vessels consisting of simple strokes constituting the most prominent additional feature. Cabins are present on a sixth of boats, but other features-such as oars, a mast/sail and steering oar are very rare. It is notable that the petroglyph creators were not usually concerned with a boat's method of propulsion.

Concerning distribution, it is clear that the largest concentration of boat images is in the south, with another significant presence in the north-central wadis Abu Wasil and Mineh. Within the southern area Umm Salam has the largest number of boats of any wadi, despite not being a direct route to the sea. This suggests a ritual reason for these motifs' creation, which will be explored in Chapter Eight. While most of the southern wadis' images are predynastic in date, this is not true of Wadi Abu Mu Awad. The considerable number of pharaonic vessels illustrated here is probably explained by it being a route to the eastern gold mines. The core central wadis Abu Iqaydi and Shalul have far fewer boats than the other areas. They also have a preponderance of Late sites. In the north, Wadi Qash has one site with nearly all its boats. This may be explained by it being a cave site which was used for shelter over a long period of time. Wadi Hammamat has only half the number of boats than Kanais/Baramiya, despite being, like them, a direct route to the Red Sea, while Atwani does not possess a large number of images. Baramiya is a junction in several directions, while Hammamat leads either to the quarries or the Roman road south-east to Berenike. Atwani is boulder-strewn and leads away from the main desert area, which may account for the lower number of images there.

The vast majority of boat petroglyphs in the Central Eastern Desert which can be dated are predynastic, and were probably created during a short period of that era—from Naqada I c to II a/b. This dating is problematic, however, given how few vessels can be directly compared to Nile Valley motifs. Dating by association allows nearly half of the boats to be dated. Moreover, square boats are mostly found in the mainly predynastic southern wadis, and few pharaonic depictions of boats have square hulls before the New Kingdom vessels in tomb paintings. Square boats are also rarely shown with a mast, sail or steering oar, which are features of pharaonic boats, but do feature central large figure(s), which are not. Therefore, it is possible that many of the square boats which cannot be dated either directly or by association are also predynastic. There is a pattern that the four wadis with the most square boats Baramiya, Umm Salam, Abu Wasil and (to a lesser extent) Mineh have a considerable number of predynastic sites. Wadi Abu Wasil stands out with a 4:1 square to sickle vessels in these ‘square boat wadis.’ Together with large feathered figures, sometimes carrying bows or throw-sticks, this marks out Abu Wasil (or at least its predynastic central section) as having a concentration of early boats within the central and northern areas, which are significantly less predynastic in character than the southern wadis.

The incurved and flared types constitute small data sets, but are useful in dating and/or differentiating those who made the petroglyphs in particular wadis. Wadi Kanais, which leads in to Baramiya, has a considerable number of incurved square and incurved sickle boats rather than purely square or sickle designs, with the addition of ‘fronds.’ These boats are all predynastic at this location. Incurved square equals predynastic in nearly every case, as does incurved sickle with the addition of ‘fronds.’ Flared boats are a feature of Wadi Umm Salam, and to a lesser extent, Baramiya. They are often associated with animal and human images, including those engaged in hunting. But there are no otherwise clear dating markers associated with this boat type because no ‘arms raised’ figure or dateable motif is situated in the same scene. Their presence in Umm Salam is part of this wadi’s particular character; an overwhelmingly predynastic wadi, with large central figures on board, but without the ‘frond’ boats of Kanais/Baramiya.

Type	Distribution	Dating	Other Features
Sickle	South, but well represented in north	Mixed	Outnumber Square boats in north
Incurved Sickle	South (none in core central wadis)	Predynastic	Often associated with Incurved Square boats
Square	South	Mainly Predynastic	‘Streamers’ on early examples
Incurved Square	Spread (not core central wadis)	Mainly Predynastic	Many in Kanais/ Baramiya
Flared	South	Probably predynastic	Often crewed
Crew	South	Mostly Predynastic	Esp. in Flared boats
Cabin	Baramiya & Abu Mu Awad	Mixed	More common in Sickle boats
Oars	Baramiya, Abu Mu Awad	Mixed	Rare
Steering Oar	Baramiya, Abu Mu Awad, Hammamat	Mainly pharaonic	Very rare, Mainly on Sickle boats
Mast/sail	Even, but esp. Abu Mu Awad & Hammamat	Pharaonic	Very rare, Mainly on Sickle boats
1 Figure	South & North-centre	Predynastic	Most common in Incurved Square & Square boats
2+ Figures	South & North-centre	Predynastic	Most common in Square- hulled boats
Dragged	South & Centre	Mixed	Rare

Table 6.3, Summary-Distribution and dating of boat images in the Central Eastern Desert

It is notable that predynastic boats tend to be associated or integrated with human and animal images, and can be seen in large groups. On the other hand, pharaonic boats are usually found in ones and twos (Figure 6.12), and are never integrated into complicated scenes consisting of many images. Even when possibly associated with animals and people, they are situated on the edge of such scenes. Thus, there is a clear distinction between predynastic and pharaonic boats in the way they are located on the rock face, and therefore also a clear difference in the reasons for their creation. There is also a pattern to the distribution of the pharaonic images. They are well represented in Wadis Baramiya and Hammamat, which are direct routes to the Red Sea, but also in Wadi Abu Mu Awad, which is not, but is a route to the eastern gold mines. Indeed, only a third of the pharaonic or later vessels are located on these direct routes. They are absent from the two wadis on the periphery of the Central Eastern Desert, Hajalij (S) and Atwani, which are not this kind of route.



Figure 6.12. Typical arrangement of pharaonic boats, with no adjacent or surrounding associated images, BAR-1, photo courtesy Yarko Koblecky

The distribution of boat petroglyphs shows major activity in the Eastern Desert in the Naqada I c-II a/b period. This is the heyday of the predynastic petroglyph creators. Activity then declines, and is much lower in the Naqada II c/d-III periods. It is also concentrated in a limited area: Wadis Hammamat, Qash and Baramiya. Boats in the pharaonic era are associated with inscriptions and particularly located on routes to mines and quarries. The dominance of square and predynastic types, mainly without a method of propulsion being depicted, contrasts with the number of sickle vessels shown with mast and/or sail in the Nile Valley and clearly dating to the pharaonic and Greco-Roman periods.

Interpretation of the function of the boats has hitherto been mainly focused on the petroglyphs constituting the forerunners of dynastic types (Winkler, 1937 & 1938; Červíček,

1993; Rohl, 2000; Wilkinson, 2003; Darnell, 2009). Attention has been drawn to a supposed similarity between square high-prowed vessels in the desert and boats traveling through the Otherworld. Červíček identified the sickle-shaped ‘Type I’ boats as precursors of divine barques mentioned in the Pyramid Texts (VIth. dynasty). He found the origin of the ‘depet’ sun barque, and the morning and evening barques in which the god Ra crossed the sky and the Otherworld (Červíček, 1993: 44). Both Rohl and Wilkinson include illustrations of these boats from New Kingdom tombs, and Chapter 5 of ‘Genesis of the Pharaohs’ is titled “Ships of the Desert: The Birth of the Egyptian Religion,” (Wilkinson, 2003: 134) despite the 2000 year gap between these and the pharaonic paintings. There is also very little evidence of solar religion in the Predynastic. Other links have been seen with royal festivals such as the ‘heb sed,’ sometimes referred to as a jubilee, in late Naqada II (Darnell, 2009: 96). However, the Heb-sed can be seen as confirming kingly power and ownership of Egypt in the First Dynasty, rather than as being rooted in the Predynastic. Therefore, there will be no connection with the petroglyphs in this regard. The likely role of the desert boat petroglyphs is explored in Chapter Eight.

Chapter Seven

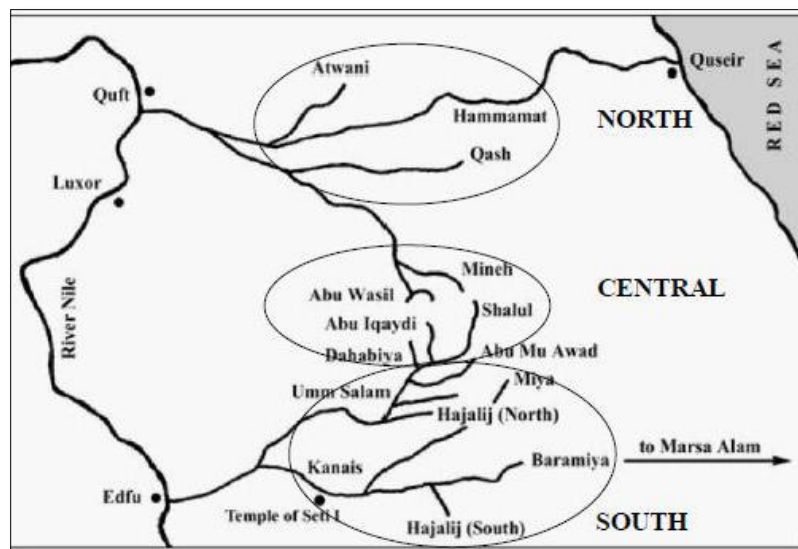
Distribution & Regional Analysis

7.1 Introduction

In Chapters 4 to 6 the specific distribution of animals, human figures and boats has been analysed. This chapter aims to look at the distribution of motifs from a different perspective. I explore the temporal distribution of sites in the Central Eastern Desert; divided into 'Predynastic' and 'Late' (pharaonic and later) sites. The Central Eastern Desert survey area comprises here the three main regions (Map 7.1), with the central area subdivided into respectively its northern section (Wadis Mineh and Abu Wasil) and middle core (Wadis Dahabiya, Shalul and Abu Iqaydi). The southern area is examined in three parts: Wadi Abu Mu Awad, then Wadis Umm Salam and Umm Hajalij (N), and finally the 'southern core' of Wadis Kanais, Baramiya, Umm Hajalij (S) and Miya. In each case the sites have been dated stylistically according to the principles outlined in Chapter Two by the presence of directly associated motifs. These include boats and 'arms raised' figures concerning the 'Predynastic' sites, and boats, evident pharaonic motifs, and horse and camel riders for the 'Late' sites. Each wadi is characterised either as mainly 'Predynastic,' 'Late' or 'Mixed' (Table 7.1) according to the method outlined in Chapter Two. It will be evident that there are significant differences in the date of sites between the three regions and within them. The patterns of distribution of particular types of boats, figures and animals are also noted. Consequently, it will be suggested that the early images trace hunting routes and point to a ritualistic purpose in this period. In contrast, the later images indicate the presence of 'roads' to the mines and quarries in the pharaonic and Greco-Roman eras.

Firstly, for each region in the Central Eastern Desert corpus the distribution of images is considered with the objectives of assessing whether motifs of each period are concentrated in particular wadis, in side wadis or in close relation to them and suggesting reasons for their location if this is the case. The orientation, height of sites and position in shelters are also examined to assess the effect of these factors on the placement of the petroglyphs. This will allow the tracking of activity through the wadis and show the different purposes motivating

creation of the rock-art in the predynastic and pharaonic periods. Secondly, the sites south of Wadi Baramiya in the Kom Ombo drainage basin, which have been partially published, are also covered and compared to those in the survey area in order to show that the character of the rock-art is integrally related to that in the Central Eastern Desert. Thirdly, reasons for the distribution of motifs are discussed and, finally, the overall distribution of rock-art in Egypt's Central Eastern Desert is reviewed as it stands after modern survey work, including the EDS, RATS and Van Craeynest surveys.



Map 7.1. Showing the North, Central & South Regions

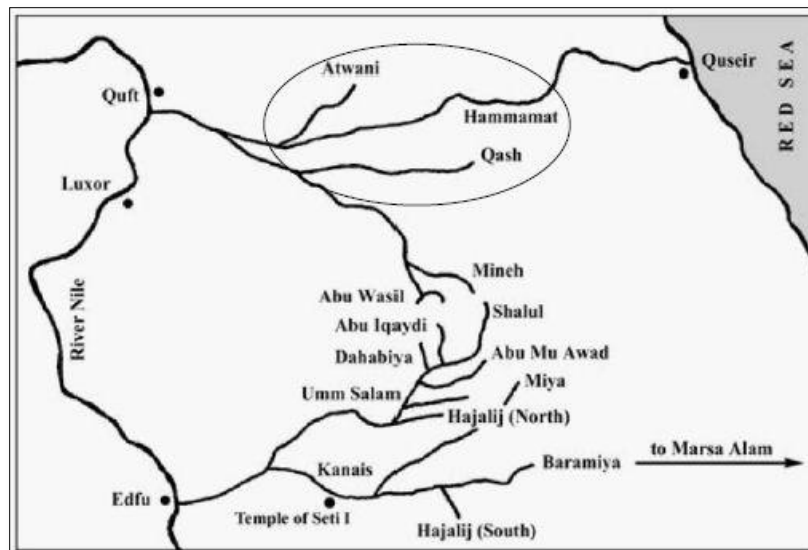
KAN1	KAN2	KAN3	KAN4	HAJS1	HAJS2	BAR1	BAR2	BAR3	BAR4	BAR5	BAR6	BAR7	BAR8	BAR9	BAR10	BAR11	BAR12	BAR13	BAR14	BAR15	BAR16	BAR17	BAR18
N/P	N/P	S/L	S/?	W/P	S/P	E/M	NE/P	W/?	SE/P	SE/L	SE/L	NE/PP	S/M	NW/P	NE/P	E/L	N/P	L/S	NE/?	N/PP	W?	N/PP	N/L
BAR19	BAR20	BAR21	BAR22	BAR23	BAR24	BAR25	BAR26	BAR27	BAR28	BAR29	BAR30	BAR31	BAR32	BAR33	BAR34	BAR35	BAR36	BAR37	BAR38	BAR39			
S/?	N/?	E/?	NW/PP	NW/PP	L	N/P	N/PP	NW/?	S/?	SE/?	N/L	N/M	PP	N/L	E/L	N/M	S/?	N/?	N/?	S/L			
MIY1	MIY2	MIY3	MIY4	MIY5	MIY6	MIY7	HAJN1	HAJN2	HAJN3	HAJN4	HAJN5	HAJN6	HAJN7	HAJN8	HAJN9	SAL1	SAL2	SAL3	SAL4	SAL5	SAL6	SAL7	SAL8
NW/P	S/L	S/L	N/L	NW/L	W/L	NE/?	NE/M	N/?	N/P	E/L	NE/L	W/?	S/?	N/PP	S/?	NE/PP	NE/?	N/?	S/PP	S/?	NE/PP	NE/PP	S/L
SAL9	SAL10	SAL11	SAL12	SAL13	SAL14	SAL15	SAL16	SAL17	SAL18	SAL19	SAL20	SAL21	SAL22	SAL23	SAL24	SAL25	SAL26	SAL27	SAL28	SAL29	SAL30	SAL31	SAL32
NE/?	NE/PP?	NW/PP	SE/PP	N/?	S/M	S/?	N/P	N/?	NW/PP	N/?	N/P	N/?	/M	N/?	NW/?	NW/PP	NW/?	N/?	?	NW/PP	NW/?	E/?	E/?
SAL33	SAL34	SAL35	SAL36	SAL37	SAL38	SAL39	SAL40	SAL41	SAL42	SAL43	SAL44	SAL45	SAL46	MUA1	MUA2	MUA3	MUA4	MUA5	MUA6	MUA7	MUA8	MUA9	MUA10
N/PP	SE/L	N/P	N/PP	N/M	N/P	SE/P?	W/?	E/?	SE/?	NE/PP	NE/PP	S/L	NE/L	SE/?	NW/L	SW/?	NW/?	NE/P	W/L	W/?	S/P	N/L	W/L
MUA11	MUA12	MUA13	MUA14	MUA15	MUA16	MUA17	MUA18	MUA19	MUA20	MUA21	MUA22	QA1	QA2	QA3	QA4	QA5	QA6	QA7	QA8	QA9	QA10	QA11	QA12
N/L	S/M	S/L	S/L	NW/PP	W/?	N/PP	S/L	NE/L	E/L	E/?	SE/L	N/L	NW/PP	W/L	NE/L	NE/L	NE/L	E/?	E/PP	E/L	W/?	NW/L	W/?
QA13	QA14	QA15						DAH1	DAH2	SHA1	SHA2	SHA3	SHA4	SHA5	SHA6	SHA7	SHA8	SHA9	SHA10	SHA11	SHA12	SHA13	SHA14
E/?	E/?	NW/?						NE/M	E/PL	N/?	N/L	E/?	N/L	E/L	W/L	W/?	E/M	S/?	SE/L	N/L	W/L	E/PP	NE/M
MIN1	MIN2	MIN3	MIN4	MIN5	MIN6	MIN7	MIN8	MIN9	MIN10	MIN11	MIN12	MIN13	MIN14	MIN15	MIN16	MIN17	MIN18	MIN19	MIN20	MIN21	MIN22	MIN23	MIN24
N/L	N/L	NE/L	NE/L	NE/L	NW/?	W/?	S/?	W/L	S/P	N/?	N/?	SW/PP	N/M	N/M	SE/L	S/PP	SE/P	S/M	SW/P	NW/P	N/L	E/M	NW/L
MIN25	WAS1	WAS2	WAS3	WAS4	WAS5	WAS6	WAS7	WAS8	WAS9	WAS10	WAS11	WAS12	WAS13	WAS14	WAS15	WAS16	WAS17	WAS18	WAS19	WAS20	WAS21	WAS22	WAS23
NE/PP	NE/L	E/L	SE/P	N/L	S/?	NE/?	E/P	E/L	NE/PP	S/P	E/L	W/L	NW/?	S/L	S/?	SE/P	SE/L	NE/PP	NE/P	NE/PP	N/?	N/?	W/L
WAS24	WAS25	WAS26	QAS1	QAS2	QAS3	QAS4	QAS5	QAS6	HAM1	HAM2	HAM3	HAM4	HAM5	HAM6	HAM7	HAM8	HAM9	HAM10	HAM11	HAM12	HAM13	HAM14	HAM15
N/PP	SE/?	S/P	E/?	E/L	E/M	M	L	N/L	E/M	NW/L	S/L	S/P	SE/?	NE/?	NW/L	N/M	E/L	SE/L	E/P	S/L	SE/P	E/?	NE/L
HAM16	HAM17	ATW1	ATW2	ATW3	ATW4	ATW5	ATW6	ATW7	ATW8	ATW9	ATW10	ATW11	ATW12	ATW13	HSQ1	HSQ2							
E/L	N/P	NE/M	W/?	E/L	NW/?	N/L	SE/?	N/L	N/P	SW/P	S/P	UP/?	N/P	UP/P	N/P	E/M							

Table 7.1. Dating of the Central Eastern Desert sites (see Appendix One for abbreviations of wadi names, N/S/W/E=North, South, West, East).

7.2 Dating & Distribution of Sites in the Northern Area: Wadis Qash, Hammamat & El Atwani

7.2.1 Main Motifs

The three northern wadis (Map 7.2) are very different topographically to each other. Wadi Qash, which continues into Wadi Zeidun, has few sites and few suitable rock surfaces, is wide and has an easy-going gravel surface in many places. On the other hand, Hammamat is relatively narrow and twists and turns (Figures 7.1 & 7.2), although it is a direct route to the Red Sea. Wadi El Atwani is not only on the periphery of the survey area, but runs north and then north-east, and is narrow and boulder strewn, making travel challenging.



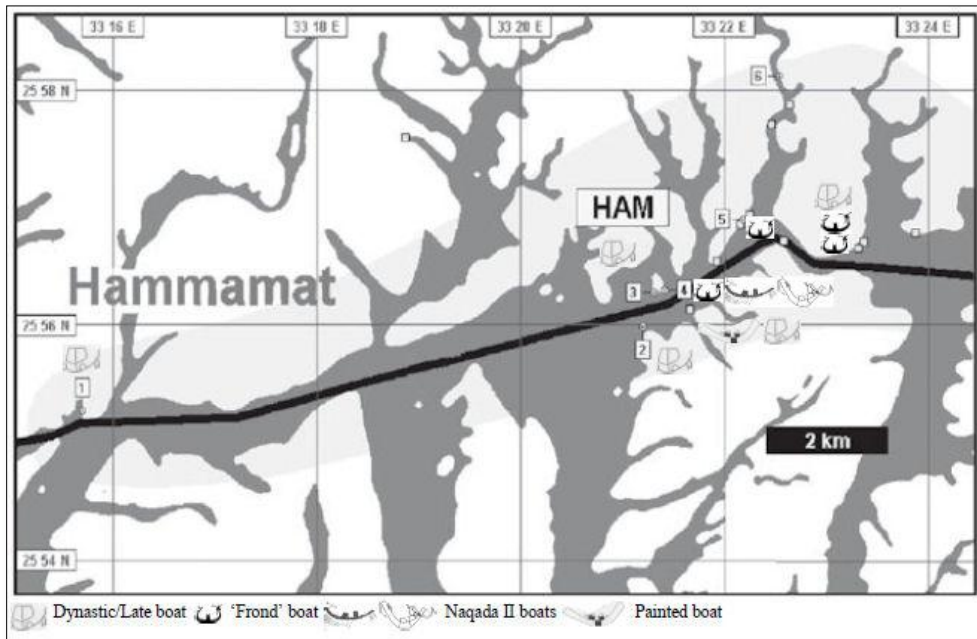
Map 7.2. Northern wadis El Atwani, Hammamat and Qash



Left: Figure 7.1. Wadi Hammamat sites cluster near side Wadi Kue, Google Earth, Right: Figure 7.2. Wide routes in Wadi Qash QAS-3 (RME-18), Google Earth

The northern area has a majority of 'Late' sites: 14 compared with 11 Predynastic (and 6 Mixed). Thus, the 'Late' sites constitute 54% of those dated here. Wadis Hammamat and Qash have the highest numbers of 'Pharaonic' figures in the survey area, while Atwani has none at all. Qash and Hammamat also have a number of 'Mixed' sites in date, demonstrating use over a long period. Both also have a number of Min figures and Horus falcons which indicate pharaonic shrines. Wadi Hammamat has the highest number of Pharaonic figures and a good number of pharaonic boats, albeit among dateable images predynastic vessels still outnumber later ones 15:12. This wadi follows the pattern of Wadis Abu Wasil and Mineh in that most of the predynastic sites are concentrated in a limited area, while pharaonic ones are spread out along the wadi (although there are two 'arms raised' figures in the Bekhen-stone quarry at the eastern extremity of the survey area).

A number of sites, both predynastic and pharaonic in date, cluster around or opposite the opening to the side wadi, Wadi Kue (Map 7.3). Animal and hunting figures are also concentrated here in a wadi which does not have a large number of these overall, suggesting that in this case, as in Wadi Baramiya in the south sites tend sometimes to be situated by side wadis where hunters could perhaps wait for game. In addition, there are four sites where later petroglyphs are at a higher level than earlier ones. Three have pharaonic inscriptions or boats above predynastic examples, suggesting that here the pharaonic image creators were looking for visibility. At one site, HAM-7, (Rohl. 2000: 126) three clearly pharaonic figures are superimposed upon a 'frond' boat with one of them standing inside it. This is a rare example of such a superimposition as pharaonic petroglyphs are uncommonly superimposed over predynastic ones, the New Kingdom boat at SAL14 being another rare example.



Map 7.3. Wadi Hammamat, showing road and gap between HAM-1 at Qasr al Banat and sites clustered near side Wadi Abu Kue, after Morrow & Morrow, 2000: 201

Wadi Qash has mostly late images, but the cave site QAS-3 (RME-18) was a shelter over a long period of time like Wadi Mineh MIN-14 (RME-24b), having a hippopotamus hunt with associated 'arms raised' figure, one blank and two Narmer serekhs, and a range of pharaonic images. There is one sickle Naqada II (Červíček's Type I) boat with an arrow (often called a 'Min') standard next to three antelope (Figure 7.3). This lack of hunting figures, dogs and a melange of animals; elements which are associated with the 'fronde' boats, follows the pattern of the D-Ware where the range of animals and figures is restricted.



Figure 7.3. Naqada II boat with 'Min standard,' QAS-3 (RME-18), author's photo

While both Wadis Qash and Hammamat were clearly used as pharaonic and Roman roads to the gold mines, quarries and the Red Sea, Wadi El Atwani has a very different character.

Most of its sites are early, two with motifs seen nowhere else in the Eastern Desert. Atwani also has no pharaonic boats or inscriptions. Indeed, it has no evidence of a pharaonic presence at all, the only late elements being horse and camel rider figures. This is a characteristic which it shares with Umm Hajalij (S), the other wadi on the periphery of the survey area. It is notable for its elephant images, including two out of the three examples of hunting them in the Central Eastern Desert, half the corpus' crocodiles, the only examples of figures in the style of those found on Naqada pottery and two sites with images unrelated to any other site in the survey area. While one of the elephant hunting scenes is near to the junction with Wadi Hammamat, the other is deep in the boulder field.

Another unlikely presence in this wadi is the large number of 'crocodiles' at two sites, also within the heavily bouldered part of the wadi. Here there are also 'hand-prints' hammered out, 'nets' figures with a line coming out of the top of the head, objects labelled 'pots' and a 'wadi map' (Figures 7.4 & 7.5). With the exception of the putative map there is nothing comparable in the Eastern Desert or anywhere in Egypt and this accentuates the special nature of many of the petroglyphs in this wadi, setting it apart from all the others. Between these two sites are three with predynastic boats and 'arms raised' figures. Notably, below the high panel at ATW-10 (Figure 7.6) there is a clearly predynastic boat and twin-plumed figure. The two rock-art traditions represented here are totally different and identification of the images unique to this wadi is unlikely without comparable finds. Unlike Wadis Qash and Hammamat, Atwani is the only wadi not a route to a significant destination in the Eastern Desert, and appears unused in pharaonic times for that reason (Hajalij (S) probably leads to Wadi Midriq). Although it has some unique petroglyphs, it does conform to the pattern of predynastic boats and hunters being present all over the Central Eastern Desert survey area wadis. The motive for predynastic people heading into this wadi would appear to be hunting, as is the case all over the Central Eastern Desert.



Figure 7.4. ATW-10 (RME-14) with 'crocodiles' & 'nets,' author's photo

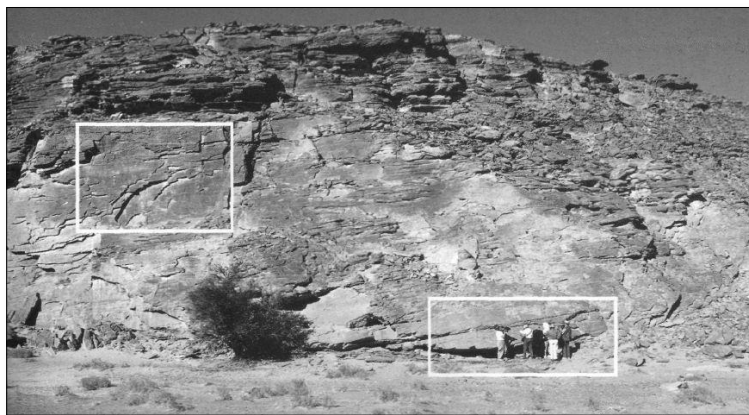


Figure 7.5. High panel of ATW-10 with unique petroglyphs and low panel of predynastic petroglyphs, Rohl, 2000: 145

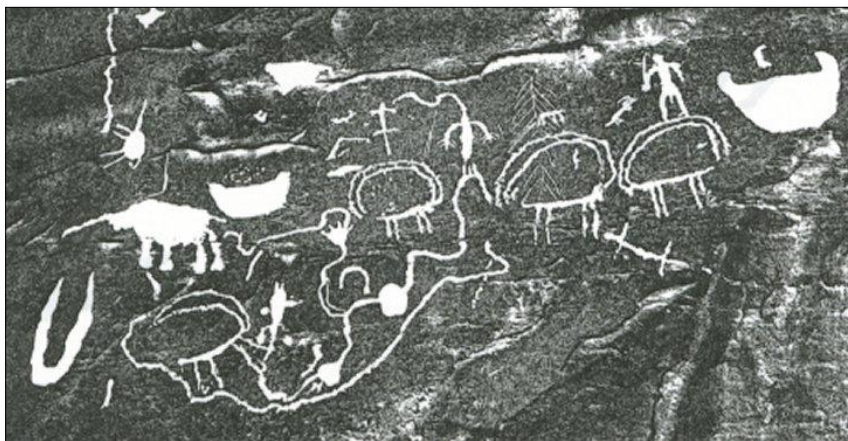


Figure 7.6. ATW-6 (RME-17) with 'hand-print,' 'pot,' & 'map,' Rohl, 2000: 198

7.2.2 Location of Rock-Art Within the Wadis

Sites in Wadi Qash tend to be at a rocky outcrop, or in the case of the major site QAS-3 (RME18) a cave formed of several large boulders, and strung out along the wadi. In contrast,

9 of the Wadi Hammamat sites are situated in or around the mouth of the side wadi Wadi Kue. This cluster of both early and later sites here is very marked. This area combines a number of shady ledges, a shelter of boulders, vegetation, and a major side wadi which could have funnelled game towards hunters waiting there. In Wadi Atwani two minor sites are close to a small side wadi entrance, but the bulk of the major sites are well into the main part of the boulder strewn valley.

7.2.3 Orientation of Sites

The pattern of site orientation is different in the northern region from the south and centre, in that the percentage of those sites facing 'North' is the lowest (34%) and the percentage facing East the highest (28%), the latter figure heavily influenced by Wadi Qash (Table 7.1, Appendix Five). Indeed, with 28% facing 'South,' the highest percentage in the survey area, the number of sites facing 'North,' 'South' and East are very nearly equal. This is in contrast to the overall 2: 1 ratio of 'North' to 'South' orientation with many fewer sites facing East or West. There is no general pattern of early or late sites tending to be orientated in any particular direction. This is due mainly to the clustering around the entrance to the large side wadi in Wadi Hammamat, the small number of sites in Wadi Qash spread over a long distance, and the winding nature of Wadi El Atwani. Both of the allegedly very early sites with unique motifs face 'South,' but conventional predynastic ones are orientated both 'North' and 'South' in the latter.

7.2.4 Site Height

All the Wadi Qash sites are 'Low' owing to their position mostly on shaded rocky outcrops in this wide wadi. Two-thirds of Wadi Hammamat's sites are situated at a 'Low' level, the second lowest percentage in the survey area (Tables 7.2-4, Appendix Five). There are a number of 'Medium' sites and these tend to have pharaonic motifs such as Min figures and dynastic boats. A shady overhang, HAM-2, the only site in the Wadi Hammamat classified as 'High' provides a superb look-out over the wadi and especially towards HAM 3 and 4 (RME-2). It has a falcon and hieroglyphs under an overhang high up, with hunting figures and animals at a low level near the wadi floor. In addition, at HAM-8 the boat with features akin to vessels in T100 is at a low level and above it is a pharaonic boat image. Thus in this wadi the usual pattern of the rare higher sites being usually predynastic does not hold true.

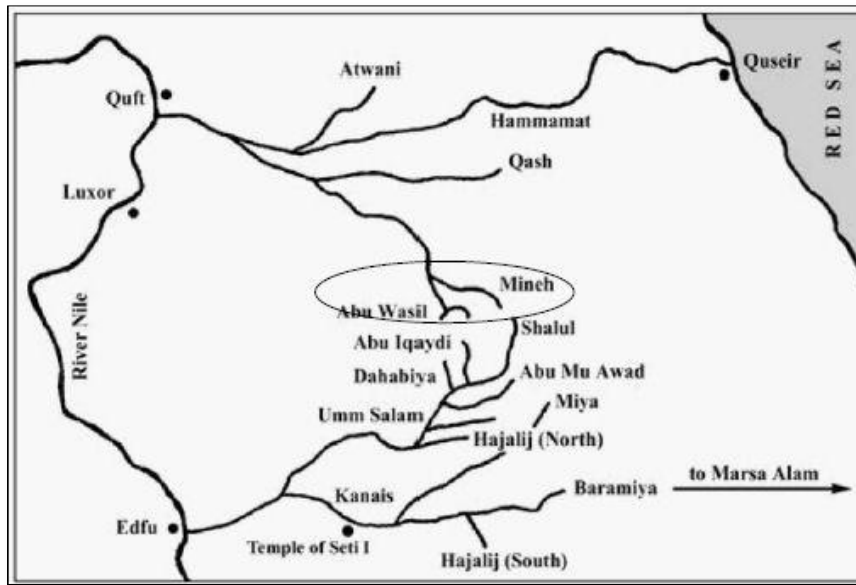
Wadi El Atwani has a contrasting pattern. All except three sites are at 'Low' level, with the remaining three being 'High.' There is not a single pharaonic motif in this wadi, and predynastic as well as horse and camel riders are located at 'Low' level. The three remaining sites are divided between the two with motifs unique in the Central Eastern Desert and two boats with 'arms raised' figures opposite another, major, predynastic site ATW-12. ATW-6 (RME-17) and ATW-10 (RME-14) have 'nets,' 'crocodiles,' 'hands,' 'bucrania/pots' and a 'map.' At ATW-10 a predynastic boat and figure are at low level with the motifs not found elsewhere high up, above where a rock pillar appears to have collapsed. Therefore, these two high sites may be even earlier than the predynastic ones and clearly the petroglyph creators here preferred elevated positions which in this narrow wadi were readily visible.

7.3 Dating & Distribution of Sites in the Central Wadis

7.3.1 Area 1: Abu Wasil & Mineh

7.3.1.1 Main Motifs

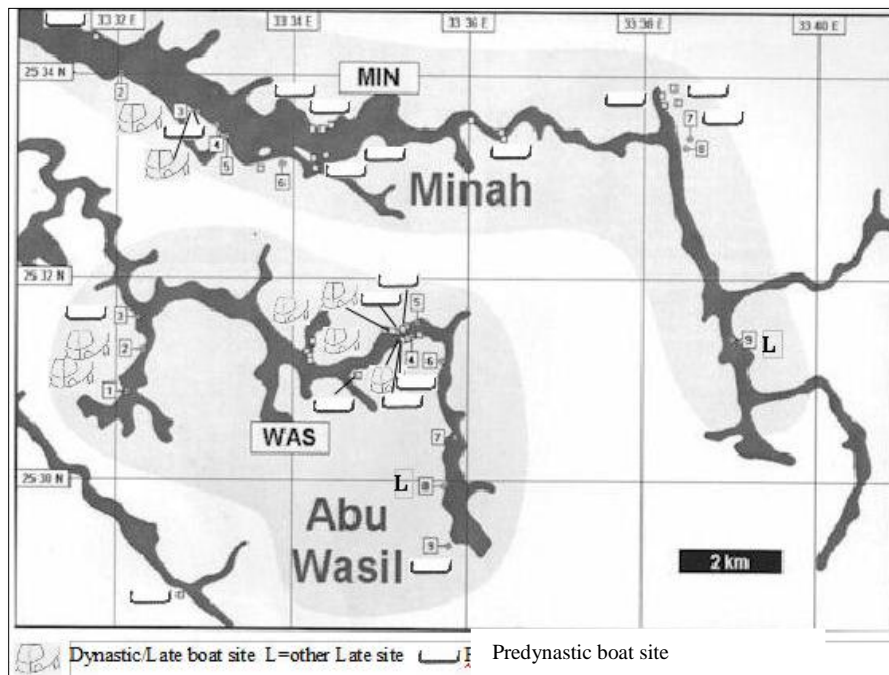
Wadis Abu Wasil and Mineh constitute the northern section of the central area (Map, 7.4), and have considerable numbers of human figures and boats of varied dates. In character they have some similarities to the core central wadis but, like the southern area, have predynastic images, as do the southern wadis. They both additionally have horse and camel riders, and Mineh has the most of any wadi in the survey area. Judging by the presence of some falcons, Min figures and pharaonic boats, as well as inscriptions, these wadis were used as routes to the eastern mines. This is especially true of Wadi Mineh, of which sections were later part of the Roman road to Berenike, with the cave site MIN-14 (RME-24b) a shaded stopping place used over the millennia. Along with Baramiya, Hajalij (N) and Umm Salam they are also wadis where hunting images are prevalent. Each also has a small number of 'arms raised' figures.



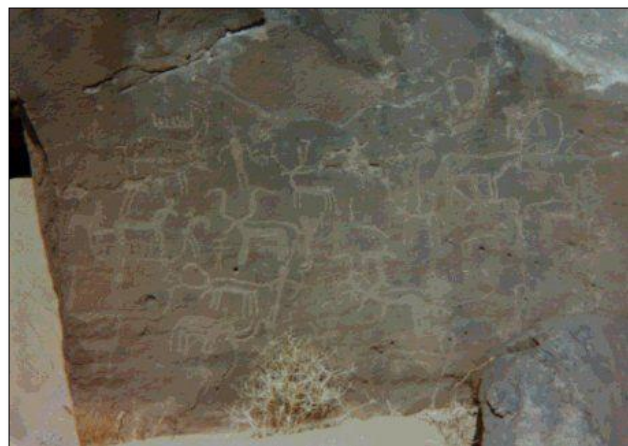
Map 7.4. North Central Wadis Abu Wasil and Mineh

Predynastic and Late sites are almost evenly balanced at 17:18 (and 4 Mixed). Moreover, by 55:13 predynastic boat petroglyphs outnumber late vessels, a ratio of 4:1 rather than the 9 or 10:1 in Wadis Kanais, Baramiya, Hajalij (N) and Umm Salam, indicating a more mixed date character. In both Abu Wasil and Mineh the ‘Late’ sites, in addition to pharaonic inscriptions (Rothe, 2008) are spread out along the wadis, while the ‘Predynastic’ ones are located in the middle (Map 7.5). This is especially true of the cluster of sites around the well-watered WAS-10 (RME-26), indicating that the pharaonic images, while often also being located in such areas, describe routes while the early ones may be centred on hunting grounds. Both Abu Wasil and Mineh have at least one ‘Integrated’ major predynastic site: WAS-10, (RME-26), WAS-16 and MIN-20 (JAW-1) with incurved ‘frond’ boats, although of a slightly different style to those in the south. WAS-10 is uniquely a site ‘in depth,’ with two flat rocks in front of the main face also possessing petroglyphs (Figures 7.7 & 7.8). However, as demonstrated in Figure 7.9, not all the available rock surfaces were used. This is also the case above and to the left where an excellent lookout position with a highly suitable surface has just one boat shown by a single line (Figure 7.10). The boat/hunting/central figure combination at this site, and at MIN-20 in less detail, resembles the integration of elements in Wadi Baramiya at BAR-9, albeit in slightly different form in that the elements are on three different rock surfaces, not one. Wadis Abu Wasil and Mineh were pharaonic and Roman routes over a long period, thus it is not surprising that they have a mixed character, with significant numbers of human figures and boats from various periods. Wadi Mineh is also notable for examples of late, perhaps Greco-Roman depiction of trade or tribute animals, as it

is extremely unlikely that giraffe, seen at MIN-22 (Figure 7.11) were actually living in the Eastern Desert during this period.



Map 7.5. Showing distribution and clustering of sites in Wadis Mineh and Abu Wasil



Left: Figure,7.7. Detail of towed boat with ‘arms raised’ figure on small triangular rock in front of main face, WAS-10, author’s photo, Right: Figure 7.8. Detail of mixed animals & boats scene on flat rock in front of main face, WAS-10, author’s photo



Left: Figure 7.9. Main face (left) & small triangular and larger flat rock (right), WAS-10. Right: Figure 7.10. Two rocks in front & to the right of the main face showing other, unused, surfaces, WAS-10, author's photos



Figure 7.11. Virtually unused rock surface to left & above of WAS-10 in prime look-out point, author's photo

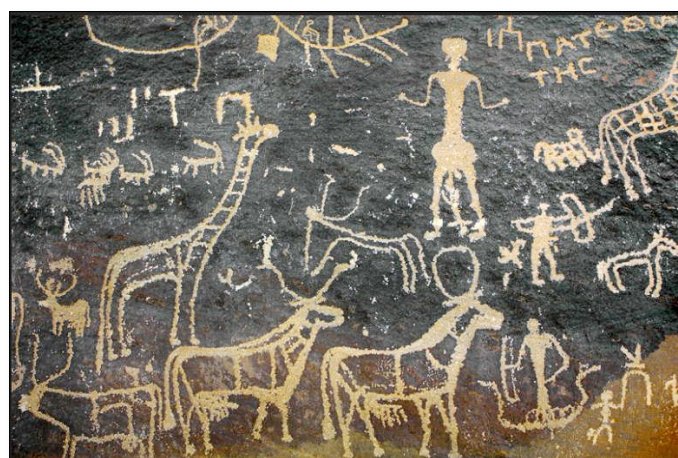


Figure 7.12. MIN-22, Giraffe and bovids with light patination in context with Greek lettering, (photo courtesy Y. Koblyecky).

7.3.1.2 Location of Sites Within the Wadis

Both Predynastic and Late sites in Wadis Mineh and Abu Wasil tend to cluster around well-watered locations, as particularly shown at WAS-10 (RME-26) where this and associated sites are situated in a part of the wadi which even today has one of the most highly vegetated areas of the CED. Thus images at side wadis and entrances to these and the main routes are not a feature of this area. Taking inscriptions into consideration, the pharaonic evidence is more spread out than the predynastic, and thus conforms overall to the pattern of describing trade/mining routes through the wadi system. In Wadi Mineh the first few sites are Late, then there is a cluster of Predynastic sites in the middle of the wadi and finally a mixed early/late mix towards the end. In Abu Wasil the initial sites are Mixed; with a number of hieroglyphic inscriptions (Rothe, 2008: 18-23), there is also a mix in the middle around WAS-10 (although the Late sites, as usual, contain few images compared to the Predynastic ones) and mainly Predynastic ones towards the end. Pharaonic travellers seem to have gone on to Bir Shalul to the south-east where there are inscriptions relating to gold (Rothe, 2008: 233), as in Abu Wasil (Rothe, 2008: 23).

7.3.1.3 Orientation of Sites

In the north-central area of the central region sites are divided between those facing ‘North’ and ‘South’ by 24: 18 with only 9 orientated East or West. This is accounted for by both Mineh and Abu Wasil having a concentration of ten or more sites on both sides of each wadi (see Map 7.8). This is particularly notable around the large ‘in-depth’ site in Abu Wasil WAS-10 (RME-26), and facing sites MIN-10 and 13 in Wadi Mineh. In Abu Wasil sites cluster in a well-watered area in a wider part of the valley with narrow entrances in and out, while in Mineh there is a concentration around two elevated sites giving a good view of approaching game. There is a complete contrast between Wadis Abu Wasil and Mineh. In the former ‘North’ facing sites outnumber ‘South’ facing ones by 5:4, while in the latter it is the reverse by 6:1 (albeit with 2 ‘Mixed’ sites facing ‘North’). The almost balanced situation in Wadi Abu Wasil is due to the clustering of sites on both sides of the wadi around the major location of WAS-10.

7.3.1.4 Site Heights

Wadis Mineh and Abu Wasil differ from those valleys further south in that they both have lower percentages of ‘Low’ sites (64% and 70% respectively). Wadi Mineh has 5 ‘Medium’

sites and Mineh 6. In Wadi Mineh two have predynastic boats, two ‘Late’ images and one is indeterminate. The two early ones face each other and are in shady locations providing suitable vantage points. The ‘High’ sites have depictions of animals and hunters, although they cannot be dated and again are good lookout positions. In Abu Wasil all but one of the ‘Medium’ sites are predynastic. Three of these, WAS-5, 16 and 21 are on distinctively shaped rocks. WAS-5 is a map-like design (Figure 7.13) which has been suggested as representing the wadi system from here to Wadi Shalul (Rohl, 2000: 167). WAS-16 has a complicated boat and hunters scene on a almost horizontal flat boulder balanced part way up the cliff face (Figure 7.14), while WAS-21 has a boat and hunters on an elongated rock again part way up the gebel slope (Figure 7.15). The single ‘High’ Wadi Abu Wasil site is above and to the left of WAS-10 (RME-26). It has a single sail boat and some animals, including an ostrich hunting scene suggesting another hunter’s lookout point. In Wadi Mineh all the high sites have depictions of hunters.



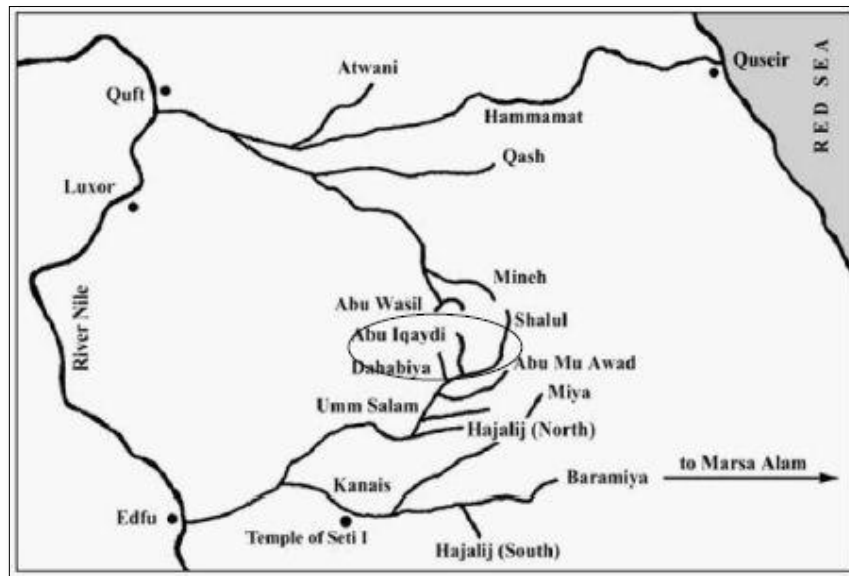
Left: Figure 7.13. WAS-5; Centre: Figure 7.14. WAS-16, Right: Figure 7.15. WAS-21 (author’s photos)

7.3.2 The ‘Core’ Central Wadis Shalul, Abu Iqaydi & Dahabiya

7.3.2.1 Main Motifs

The central region consists of two areas: the ‘core’ central wadis and the north-central ones. The core central wadi sites (Shalul, Abu Iqaydi, Dahabiya-Map 7.4) stand out in differing considerably from those in the south and also differ from northern and north-central ones in that they comprise overwhelmingly Late sites (see Table 7.1). Indeed, there are 16 Late sites and only 5 Predynastic ones, Late sites comprising two-thirds of the total. Going northwards into the central area, the first site in Wadi Shalul displays more in common with the southern sites generally in having a large hunting scene, a hunter with bow and ‘tail’ and asses. After this, the number of images decreases, and the sites have no predynastic motifs until the northernmost one, SHA-14. This has a single terminal predynastic/ early dynastic boat (Naqada III), and shows no indication of activity in Naqada I and II. The area around Bir

Shalul and the pass through Gebel Shalul have a few pharaonic inscriptions but no petroglyph sites, suggesting that not many people came that way, especially in the predynastic era. There are also few hunting scenes in the central wadis of Shalul and Abu Iqaydi, few boats, but numerous fighting horse and camel riders are located there. Late sites outnumber Predynastic ones 16:3 and, unusually in the survey area, pharaonic boats outnumber predynastic ones. Indeed, there are only 4 identifiable predynastic boats in these two wadis (and one of these is the image dated to Naqada III at SHA-14).



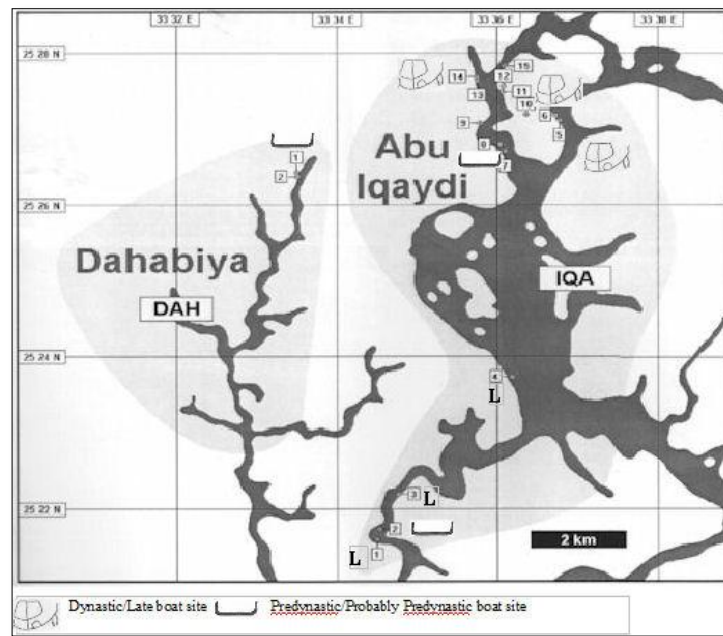
Map 7.4. Core Central Wadis: Shalul Abu Iqaydi, and Dahabiya

Abu Iqaydi has even fewer human figures than Shalul, although it has more sites, and examples of hunting are low in number. These two wadis therefore appear to mark a hiatus with a heavy predynastic presence north and south of this area but not within it. In the Nile Valley between Hierakonpolis opposite the southern area, and Naqada and Abydos in the north, there are no major predynastic settlements. Moreover, no examples of predynastic C and D-Ware have been reported between these two settlement areas (Graff, 2009: 145). The side wadi, Wadi Dahabiya, is not on any main north-south route, and has different characteristics to the previous two wadis in that one of the only two sites has several predynastic square boats right at the end of the wadi.

7.3.2.2 Location of Sites Within the Wadis

In Wadi Shalul three ‘Late’ sites are located near a side wadi, while in Abu Iqaydi there is a concentration of sites on both sides of a large rock feature in the middle of the route (Map 7.5). These latter sites may thus be related to shade as (mostly late) travellers came back and

forth. SHA-1 is located a little way into the wadi from its junction with Wadi Batur. Consisting of a large hunting scene akin to those in sites further south, and without the horse and camel rider depictions of much of the central area, this one site has more in common with the predynastic petroglyphs of further south. There is a disconnect between this and the rest of the central core.



Map 7.5. Showing overwhelmingly Late character of Wadi Abu Iqaydi and distribution around large central rock feature (L=Late non-boat site), After Morrow & Morrow, 2002: 135

7.3.2.3 Orientation of Sites

The central region differs from the southern in that sites orientated 'North' represent under half (47%) of the total. However the ratio of 'North' to 'South' sites is still 2:1, as it is in the south. There is a higher proportion of sites facing East and West: 30% compared to 12% in the southern region. That the core central wadis Abu Iqaydi and Shalul have 16 sites facing East or West, more than the 12 facing 'North,' is unsurprising given that they generally run north-south. However, these wadis still have a winding character-accounting for the presence of a number of sites facing 'North.' In Abu Iqaydi more than half the sites face East or West due to their location either side of the massive rock feature in the middle of that wadi. Although Wadi Shalul tends to go northwards, a branch runs eastwards and sites are divided between this and the main part of the wadi. This accounts for half the sites facing 'North'/'South' and half East/West.

7.3.2.4 Site Heights

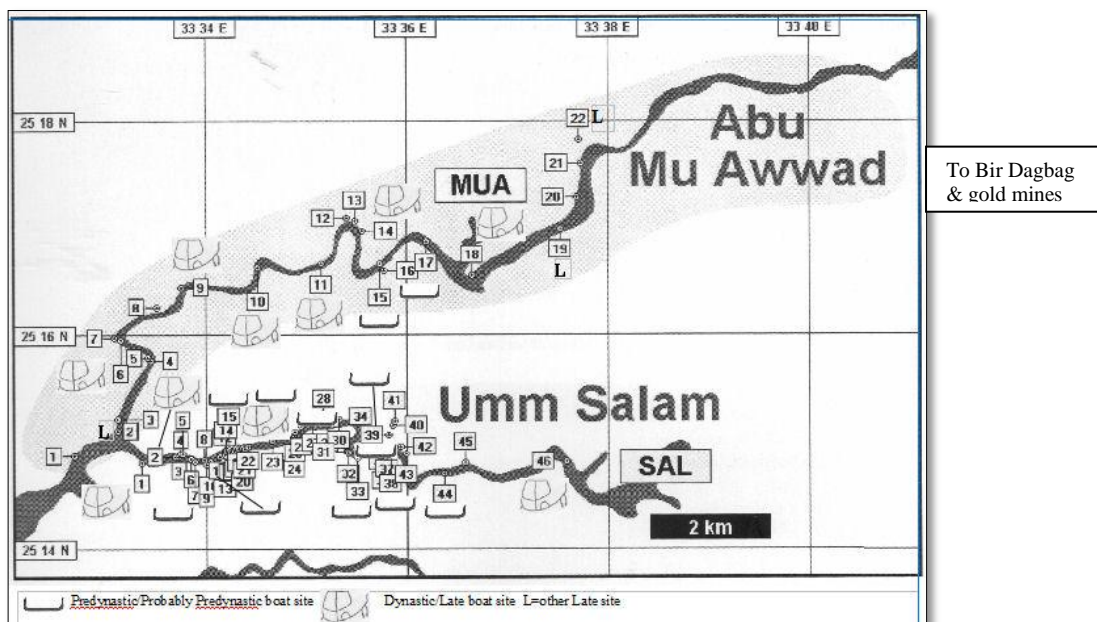
The core central wadis uniformly have 'Low' sites, with Wadi Shalul possessing the single other site which is 'High.' This is a smooth cliff face above a scree slope in a prominent position with a single Naqada III boat and images from much later, perhaps from the post-pharaonic period. Thus both the very few early images and the pharaonic examples in this overwhelmingly 'Late' area are found at a 'Low' level.

7.4 Dating & Distribution of Sites in the Southern Wadis

7.4.1 Southern Region Area 1: Wadi Abu Mu Awad

7.4.1.1 Main Motifs

The southern region can be divided into three subsidiary areas, the northernmost area of which comprises the wadi parallel to Umm Salam: Abu Mu Awad. This southern wadi has a larger amount of later petroglyphs than predynastic ones by 11:4 (with only one 'Mixed,' Map 7.6). Umm Hajalij (N) has predynastic images near its beginning at the junction with Wadi Batur (probably a route in to the desert from the Nile along with Baramiya, but where the rock is largely unsuitable for images) and dynastic/late ones further on in association with inscriptions (Rothe, 2008: 239). A 'Neb-sen' is attested from Wadi Mineh to the north, Dunqash to the south and probably from this wadi (Rothe, 2008: 242). A route can thus be traced from Abu Mu Awad down through part of this wadi east-west. Routes down through the wadi systems utilised side wadis and the wide, easy stretches of the main wadis. Abu Mu Awad is clearly a route to the gold mines around Bir Dagbag to the east, marked as a mainly pharaonic and later wadi by the number of inscriptions, pharaonic boats and small number of hunting figures.



7.4.1.2 Location of Sites Within the Wadi

In Abu Mu Awad the location of early sites at or near an entrance to a side wadi is not a feature. All but one of the sites are well within each wadi, and in Umm Hajalij (N) are located only in the southern branch of this valley. MUA-1 is located well before the junction of Umm Salam and Abu Mu Awad and therefore could relate to either wadi. It consists of two towed boats but with no dating marker. Therefore, there is no clear marker of the entrance and sites appear located as usual for the Central Eastern Desert to be related to vegetation and shade-probably constituting rest stops en route.

7.4.1.3 Orientation of Sites

Wadi Abu Mu Awad has a different character from other wadis in the south of the survey area. Firstly, it has more than twice the number of Late sites to early ones (11:4), unique in the southern region. Although sites orientated 'North' in this wadi outnumber ones facing 'South' by 9: 5, they are a minority of all sites in this wadi whereas overall in the survey area 59% of these face 'North' (Table 7.1, Appendix Five) and the vast majority of 'Late' sites here face every direction except 'North.' Thus Abu Mu Awad, although situated in the south, has more of the character of the central and northern regions where sites orientated 'North' constitute less than 50%.

7.4.1.4 Site Heights

In Abu Mu Awad there are no 'High' sites. Indeed, all those in this valley are 'Low.' The wadi is narrow and runs west-east, and has a similar character to Wadis Umm Salam and Umm Hajalij (N) in this respect. However, its sites overwhelmingly have a 'Late' date and appear to be stopping off places on the way to the Bir Dagbag gold mines, rather than mark hunting rest/lookout stops where height was needed in order to spot approaching game animals.

7.4.2 Southern Region, Area 2: Wadis Umm Hajalij (N) & Umm Salam

7.4.2.1 Main Motifs

The second area of the southern region consists of Wadis Umm Salam and Umm Hajalij (N) which run parallel to each other north Kanais/Baramiya. Together, these wadis have

overwhelmingly Predynastic sites by 21:6 Late (with 6 Mixed). While sites in Umm Hajalij (N) are balanced in date, the number of boats is overwhelmingly early in a ratio of 8:1 (9:1 in Umm Salam). In Umm Salam the one ‘frond’ boat is of a slightly different design and uniquely contains two ‘arms raised’ figures, and there are none in Umm Hajalij (N). Both are notable for the number of the generally uncommon ‘Flared’ boats. Like Baramiya Umm Salam has a considerable number of single large figures in boats, but unlike the rest of the southernmost area some predynastic boats have oars, which are uncommon in any period. Umm Hajalij, on the other hand, has few large figures on board, although these are concentrated in vessels which are predynastic, as in Umm Salam.

Umm Salam also has the highest number of human figures, many of which wear plumes, but not a single one of the pharaonic or horse and rider figures. Hunting practices are carried out differently from other wadis in that the use of bows is extremely low, while hunting groups with dogs are the norm with nearly a third of all the dog images in the survey area located here. Indeed, Umm Salam is notable for its large numbers of ostrich, giraffe, antelope and ibex noted both for their presence and in hunting scenes. A considerable proportion of the hunters here wear a ‘tail.’ This wadi is also notable for unusually having two large agglomerations of animals: (both 90 +) one a panel at SAL-14, and the other at SAL-40. Umm Salam and Hajalij (N) have a very low amount of pharaonic petroglyphs, and are unusual in having no pharaonic human figures at all. They do not appear to have been used as a route to the mines. This narrow valley has the largest number of sites in the survey area (46), despite being quite a short wadi and only 60% of its length possessing petroglyph sites.

7.4.2.2 Location of Sites in the Wadis

In this second area of the southern region, Umm Salam does not have sites at its entrance, but it does have a concentration of sites facing around and inside the entrance to a side wadi not far from where the petroglyph sites peter out. SAL-35 is on an elevated cliff opposite the entrance and constitutes a major site with three ‘arms raised’ figures present among a mixture of animals (see Figure 7.25). Like BAR-4, this appears to ‘point’ to the side wadi, where SAL-40 has a tableau of a mass of animals with hunters amongst them as the figures are at SAL-35. The content of the SAL-35 scene is of control of animals and suggests a major hunting route in this area. This concentration of petroglyphs is the last before the rock becomes more friable and, therefore, unsuitable for images and where the wadi floor appears

completely dry and without vegetation for the remaining 40% of its length. In Umm Hajalij (N) only the southern of the two branches has petroglyphs and the two sites near the entrance to the northern branch do not contain dateable images. Otherwise, sites are found in a restricted section, the first 40% of the wadi-probably due as in Umm Salam to the presence of vegetation in this area.

7.4.2.3 Orientation of Sites

In Umm Salam no less than 33 out of the 46 sites (72%) face 'North,' even though there are suitable rock surfaces for petroglyphs on both sides of the wadis. 16 out of the 19 sites which can be identified as Predynastic (although a considerable number of sites in this wadi cannot be dated) face 'North.' Only a single 'Late' site does so. Therefore, as is the case further south, there is a clear pattern of the early petroglyph creators preferring to place their sites facing northwards. Indeed, here the percentage of sites facing 'North' is overwhelming and the greatest out of any wadi. This is despite the narrowness of the wadi and the availability of rock surfaces on both sides of the cliff wall. Figure 7.16 demonstrates this, showing a shady spot facing 'South' in Umm Salam which is eminently suitable for hammering petroglyphs but which has been left untouched. This points to a conscious choice by the hunting groups who traversed this route to make their rock-art on the southern side of this wadi. Wadi Umm Hajalij (N) follows the pattern of the southern wadis in that sites facing 'North' outnumber those facing 'South' by 5: 2 out of 9 sites. The remainder face east or west. All 3 Predynastic and Mixed sites face 'North' (although one 'Late' site does too). Neither of the purely 'Late' sites face 'North.'



Figure 7.16. Unused suitable rock surface, Wadi Umm Salam, author's photo

7.4.2.4 Site Heights

The overwhelming representation of ‘Low’ sites here can be accounted for by the nature of the topography of the wadis. Wadi Umm Salam contains the largest number of sites in the survey area and is illustrative. This east-west wadi is particularly narrow and straight, with many smooth rock faces near ground level (42/46 sites classified as ‘Low’-91%) which are easily accessible to the petroglyph creator. This wadi is accessible at both ends and at its eastern end opens out into what may be a dried up lake bed. Wadi Umm Salam is therefore one of the easiest in which to find petroglyphs. One merely walks or drives slowly along it and petroglyphs on both sides of the wadi can be seen in sequence (Figure 7.17).



Figure 7.17. Typical ‘Low’ rock face suitable for easy petroglyph making, Wadi Umm Salam, author’s photo

In the Wadi Umm Salam, SAL-35, the only ‘High’ site, consists of a cliff face with loose boulders in front, with petroglyphs on the main face. It is reasonably easy to climb up the boulder/scree slope. In addition, the flat smooth quality of the cliff face makes it a good surface for petroglyphs (Figures 7.18 and 7.19). The images are clearly visible from the wadi floor and the site faces the opening to a side wadi. It is also notable for the huge boulder that perches on the slope, behind which are more petroglyphs. It is situated immediately opposite a side wadi which contains three sites with hunting images just inside the wadi entrance. Wadi Umm Hajalij (N) has only one ‘Medium’ site with all the others ‘Low.’ This has a hunter and dogs chasing their quarry, suggesting a lookout point, but it has no dateable motifs.



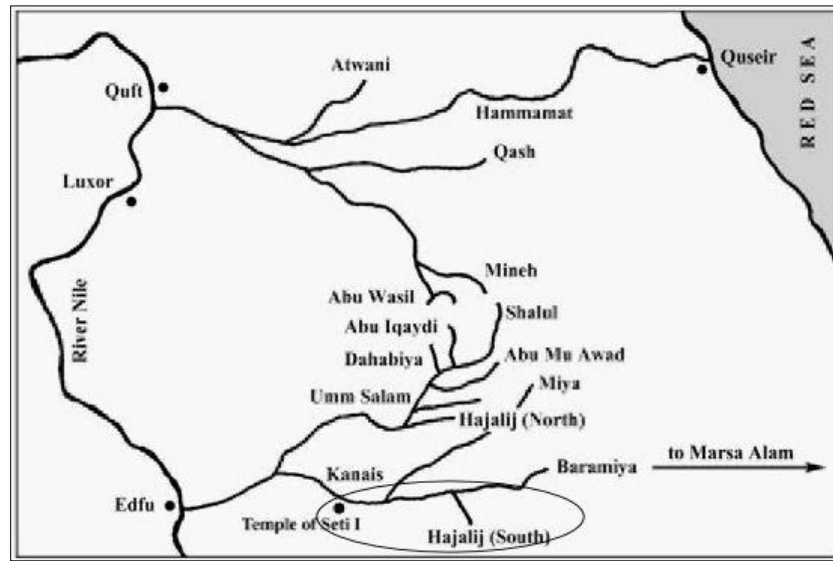
Figures 7.18 & 7.19. SAL-35. Left: the site opposite side wadi, Right: Highly visible scene on main cliff face to left of large boulder, author's photos

7.4.3 Southern Region Area 3: The 'Southern Core'

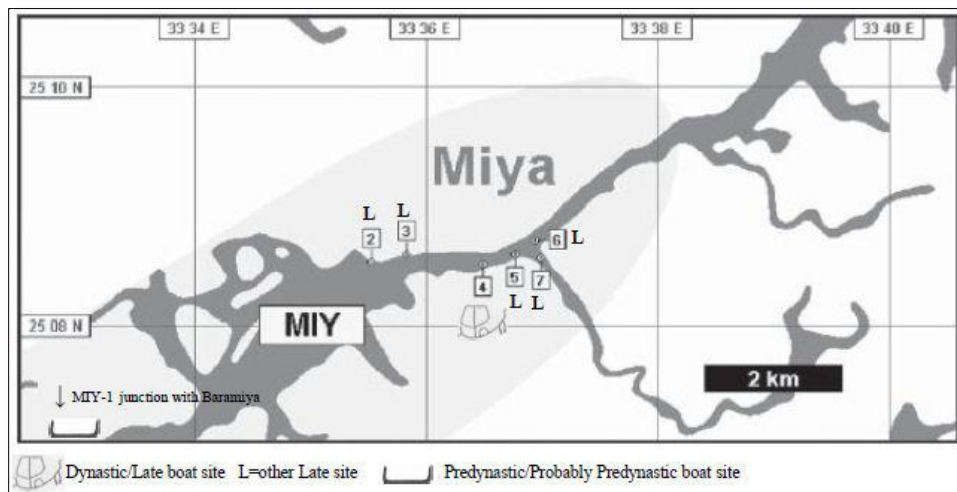
7.4.3.1 Main Motifs

The 'predynastic southern core,' which consists of Wadis Hajalij (S), Kanais/Baramiya, and MIY-1 due to the concentration of 'frond' boats and 'arms raised' figures (Map 7.7).

Although there are also 'arms raised' figures in Umm Salam, there is only one 'frond' boat and there are none in Hajalij (N) which runs just south and parallel to Umm Salam. No more 'frond' boats are found until Wadis Abu Wasil and Mineh more to the north, as there are none in the core central wadis. Overall, there are far fewer in the northern half of the survey area. The two sites in Hajalij (S) are just round the corner from the junction with Baramiya, and the southernmost Miya site at 25° 00' N, close to its junction with Baramiya. There are no other sites in Wadi Miya until around 25° 08'N (Map 7.8). All of the other Miya sites are pharaonic or later and probably constitute part of a route north-east from Kanais/Baramiya to the gold mines (Map 7.8). Above all, in these wadis identifiable predynastic boat images outnumber later ones by nearly 10:1.



Map 7.7. Showing the 'Predynastic Southern Core' of Wadis Kanais/Baramiya, Hajalij (S) & MIY-1; the southernmost site of Wadi Miah



Map 7.8. Distribution of sites in Wadi Miya showing discontinuity between single Predynastic belonging to the southernmost core, and other Late sites outside it, after Morrow & Morrow, 2002: 152

Not every suitable rock surface was used by the early petroglyph creators. While large flat surfaces, as at BAR-4, were utilised, others which appear to the modern observer to have been an 'obvious' candidate for use were not. BAR-8 (Figure 7.20) has a long, smooth and slightly sloping wadi wall. There are petroglyphs and a hieroglyphic inscription with the same patination from the reign of New Kingdom pharaoh Thutmose II, but no predynastic images. However, there is a clearly predynastic scene with an 'arms raised' figure amongst animals to the left in a shaded position. This provides additional evidence to that from Abu

Wasil and Umm Salam that the predynastic petroglyph creators preferred shady locations rather than being concerned with obvious display.



Figure 7.20. BAR-8 smooth surface with pharaonic era petroglyphs, and predynastic scene among rocks to left, (author's photo)

In regard to the integration of motifs, BAR-9 stands out, in having over a hundred images, and also in its association of hunting, harpooning/lassoing/controlling, frond boat with central 'arms raised' figure on board, and hunting figure (with 'tail') standing with one hand on hip carrying a bow while standing in a boat. Moreover, figures in this style can probably be seen at four other sites in Wadi Baramiya, including the major BAR-9 site (Figure 7.21), at MIY-1, at five sites in Wadi Umm Salam, HAJ (S)-1, on four panels in Wadi Midriq south of Baramiya, including one with thirty-seven related figures (see Figure 7.22) and at least one in Wadi Sibrit (see Figure 7.23). Hunting is the main activity of all of these figures, although at three other sites the figures are associated with boats. These 'hand on hip with bow' figures stand out, since, unusually, we can trace them through several wadis. They also increase the significance of the large site BAR-9. This contrasts to the other major predynastic boat site at Kanais, where complex hunting scenes are absent. There, the emphasis is on the number of 'frond' boats and some appear to be voyaging on cracks and fissures in the rock, a rare feature in the survey area.



‘Hand on hip with bow’ hunters Left: Figure 7.21. BAR-9 (author’s photo), Centre: Figure 7.22. HAJ (S)-1 (author’s photo) Right: Figure 7.23. Wadi Midriq (photo Cheryl Hanson).

7.4.3.2 Location of Sites in the Wadis

Although most of the petroglyph sites are located in the main fifteen wadis of the survey area, some sites are situated in side wadis or in the entrances to them, or at a wadi junction. This occurs in 24% of sites overall (59 cases), and particularly in Wadi Baramiya in this region at 51% of sites (20 out of 39 sites). BAR-4 with its large number of predynastic boats is situated exactly opposite the entrance to Wadi Hajalij (S) (Figures 7.24 & 7.25). In Baramiya the sites at or near side wadis are spread evenly along the area in which sites are distributed, and there are many side wadis here. Regarding sites near to a wadi entrance, there are four closely related sites in Wadi Kanais near to where the Temple of Seti I is located. The two predynastic ones are close to a water source, while the lone pharaonic boat is out of sight on the opposite side of the wadi. However, there are numerous hieroglyphic inscriptions on rock faces around the temple. The large number of petroglyphs concentrated here is therefore associated with water, and perhaps with shade under the cliffs and among the large boulders. It is the first place on entry from the Nile Valley which presents a convenient stopping place. The single predynastic site in Wadi Miya is near to the junction with Baramiya and displays boats, hunting and ‘arms raised’ figures. It thus has much more in common with Kanais/Baramiya than the remainder of Wadi Miya.



Left: Figure 7.24. BAR-4 panel with many boat petroglyphs facing entrance to Wadi Hajalij(S), Right: Figure 7.25. Entrance to Wadi Hajalij(S), author's photos

7.4.3.3 Orientation of Sites

In these wadis sites facing 'North' (North/North-East/North-West) outnumber those orientated 'South' (South/South-East/South-West) by 22: 9 with 3 facing east and 4 west. In the whole of the Central Eastern Desert 'North' facing sites outnumber 'South' facing ones by 125: 63 or almost exactly 2: 1, so the ratio here is even greater. Only 3 of the 'North' sites in these southernmost wadis are 'Late.' Thus, there is a pattern that creators of the early rock-art clearly preferred to place their petroglyphs on the southern side of the wadis and facing northwards. There is no particular pattern concerning the 'Late' sites, a situation which is apparent over the whole of the survey area. The pattern of orientation of sites and boats also suggests that the southern wadis have a different character than the other areas. In the southern wadis Predynastic sites overwhelmingly face 'North' (north/north-east/north-west) and some very suitable rock surfaces were unused, while 'Late' sites follow no particular pattern. In all other parts of the Central Eastern Desert there is no pattern in the way early sites are orientated. Despite the difficulty of determining which way boats are travelling due to many vessels' symmetry, predynastic boats go east by a ratio of 2.5:1 in the south, while there is no discernable pattern in the central and northern wadis. Concerning pharaonic boats there is no particular pattern over the survey area. This argues against the idea that boats in the Predynastic act as sun-bearers, since in that case they should be orientated westwards to carry the sun across the sky from rising in the east to setting in the west. Moreover, the integration of boats in this period with animals and hunting suggests other explanations.

7.4.3.4 Site Heights

80% of the sites are at a 'Low' level in this area, which matches exactly the average for the Central Eastern Desert (Table 7.2, Appendix 5; for 5% of sites there is no information). Wadis Baramiya and Hajalij (S) are narrow with many sites consisting of a smooth rock face with boulders in front, characteristic of the desert wadis. There is a lack of suitable higher accessible surfaces. Within this area all except one of the 'Medium' and 'High' sites are early and the exception is not illustrated in the publications. KAN-2 is approximately 8 metres above the wadi floor and accessed by a rock pillar, while the other site here is on some low rocks (Figure 7.26) and these are the two most suitable rock surfaces at this location. Wadi Kanais is wide at this point, so the images certainly cannot be seen by travellers unless they hug the southern side. The presence of a shaded spot with a water supply probably attracted the petroglyph creators. The boat images here appear carefully delineated, resemble those at Hierakonpolis HK61 (Berger, 1992: 108) and lack the context of complicated hunting scenes together with 'frond' boats in the other 'southern core' wadis. A rare feature in the survey area is the number of boats made just above a crack in the rock face, perhaps representing voyaging on a water line. The other major 'Medium' (BAR-4) and 'High' (MIY-1) sites are in significant positions. BAR-4 faces the entrance to Wadi Hajalij (S) and MIY-1 is a short distance inside the wadi. The latter represents a marked difference to all the remaining Miah sites, which are much further north and all 'Late.'



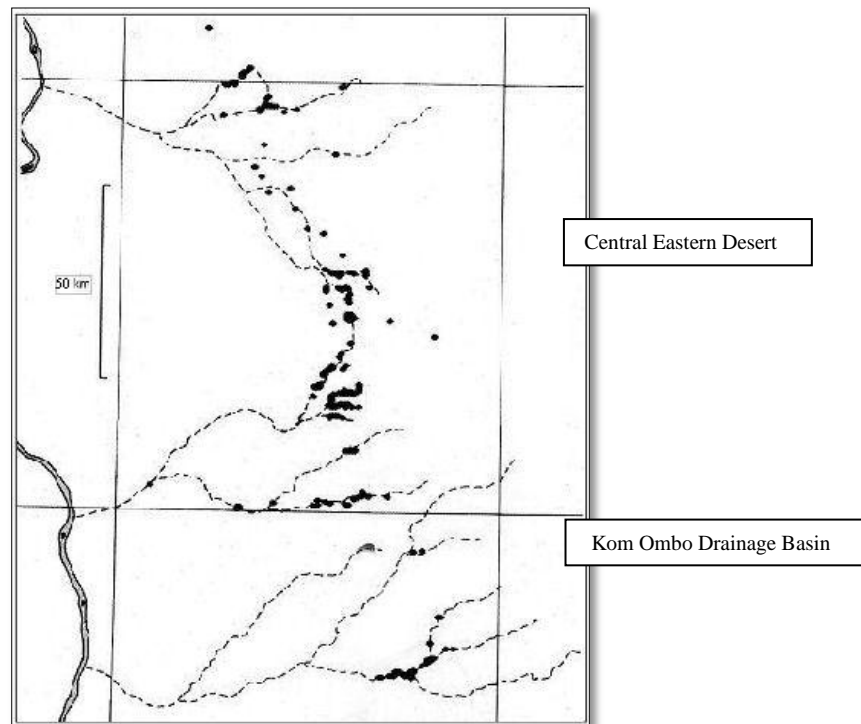
Figure 7.26. KAN-1, high cliff face and KAN-2, boulders in front, author's photo

7.5 To the South of the Southern Wadis: Rock-Art South of Baramiya

The Central Eastern Desert constitutes only one half of the desert region which is located to the east of the core area of the Naqada culture. In fact, the wadis to the north and south of Wadi Baramiya comprise one integrated zone, and it is even possible to trace the route of one group of petroglyph creators from the Central Eastern Desert into the Kom Ombo Drainage Basin. We cannot therefore consider the Central Eastern Desert in isolation. This study concentrates on a corpus comprising sites within the ‘Central Eastern Desert’ and has defined that area as being those wadis including and between Hammamat in the north and Kanais/Baramiya in the south, with El Atwani and Umm Hajalij (S) on the northern and southern periphery. However, there are routes southward from Wadi Baramiya leading in to the Kom Ombo Drainage Basin. Further EDS expeditions under the auspices of the University of Minnesota surveyed the latter area, finding petroglyphs related to those located in the Central Egyptian Desert. Therefore, this partially published material is considered here to place all the petroglyphs in context, especially since some of the same themes within the Central Eastern Desert rock-art continue further south. As the orientation and height of sites have not been published, they cannot be considered here.

The rock-art of the Central Eastern Desert is different in many ways from that in the Nile Valley, above all in the lack of the ‘Integrated’ scenes in the latter. Many patterns seen in the Central Eastern Desert do however continue in the Eastern Desert south of Wadi Baramiya. While the Kom Ombo Drainage Basin continuation of the EDS survey has not been comprehensively published, data sets regarding 48 additional sites in Wadis Dunqash, Muweilhat, Sibrit and Shait are available (Judd, 2009). Additional photos, although not recorded site information, have also been obtained concerning Wadi Midriq and further south to the published EDS sites in Wadi Umm Hajalij (S). Although only two Hajalij (S) sites are included in the EDS, more sites were located later but not published (Rothe, personal communication, 2010). This wadi leads into Wadi Bezeih, which in turn is a route into the Kom Ombo drainage system (C. Hanson, personal communication-it is likely that a dozen sites are represented there, bringing the number of Eastern Desert sites overall to at least 306). Wadis Sibrit and Shait contain asses, hunting figures and ‘frond’ boats which would not be out of place in Wadi Baramiya (Figures 7.27 to 7.30). In Wadi Midriq there are additional ‘frond’ boats and hunting scenes (Figures 7.29 to 7.31), in addition to a Naqada III vessel, one of perhaps only four in all of the Eastern Desert. A further wadi, Abu Hajalij, near Wadi

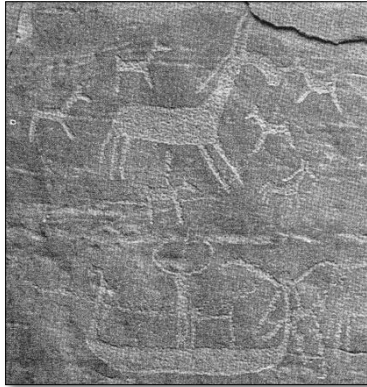
Dunqash, was additionally briefly surveyed (personal communication, R. Rothe, 2010). The general pattern from the Central Eastern Desert continues into the area south of Baramiya, with crew and large figure(s) best represented, while the presence of a mast/sail and steering oar is very rare.



Map 7.9. Distribution of Eastern Desert sites to the east of the core Naqada culture area, after Judd, 2009: 139

Working from Judd's data sets and the Midriq photographs, an additional 83 boats, 162 human figures, and 177 animal petroglyphs can be identified, although additionally 24 sites with ostriches and 13 with ibex are listed without details of how many animals are present there. Since these animals are usually depicted in groups and herds, there must be a considerable number of them. The prevalence of ostriches is indicated by their presence at 50% of the sites reported by Judd. Only 2 hippopotami and 1 crocodile have been located, but Figure 7.29 shows predynastic hunting of the former and a crocodile hunting scene is reported by Shepherd (Figure 32, 2004:7). Significantly, the hunters involved here are the type carrying a bow with a 'tail' and one hand on hip seen in Baramiya in the Central Eastern Desert. Although this information is partial, it indicates that the general character of the rock-art in the Central Eastern Desert definitely continues south into this area. One difference is that 76 cattle from this area can be added to the 290 in the Central Eastern Desert, but structures on the back of some animals, and the presence of larger groups of animals

compared to many singletons in the Central Eastern Desert, indicate that domesticated herds are usually portrayed there. Moreover, the proportion of boats is lower in the Kom Ombo Drainage Basin than in the Central Eastern Desert (Judd, 2009: 110-111).



Left: Figure 7.27. Ass hunt and 'frond' boat, SH-11, Wadi Shait, Judd, 2009: 128, Right: Figure 7.28. Hunting Scene, SBC Wadi Sibrit, Judd, 2009: 129



Wadi Midriq illustrations, Left: Figure 7.29. Hippopotamus hunting from 'frond' boat, photo courtesy AWT, Centre: Figure 7.30. 'Frond' boat, Right: Figure 7.31. Naqada III boat, photos courtesy Cheryl Hanson

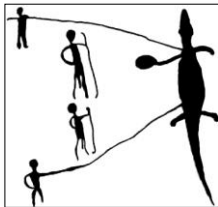


Figure 7.32. Illustration of crocodile hunters further into Wadi Hajalij (S) beyond the two sites recorded in the EDS, Shepherd, 2004:7

The existence of a small number of 'frond' boats and the continued prevalence of hunting demonstrates that Naqada I c-II a/b people used these southern routes through the desert. Indeed, at one (identified only from a photo) Midriq site, 37 hunters-many with one hand on hip and carrying a bow, stand with dogs and asses (Figure 7.33). Hunters of this type appear to have ranged north and south of Wadi Baramiya. Rothe (2008) records 77 pharaonic inscriptions in the Kom Ombo Drainage Basin wadis (plus 186 in the Central Eastern Desert-not including Wadi Hammamat), concentrated in the vicinity of the Dunqash and Muweilhat gold mines and the predynastic petroglyphs are generally in the same area, although there are

additional concentrations in Wadis Sibrit and Shait. In the Nile Valley four ‘three frond boats’ are at Hierakonpolis, El Hosh (and a ‘two frond’ vessel here) and near Silsila (Figures 7.34 & 7.35), both of the latter being opposite the Kom Ombo Drainage Basin. All these four are west of the southern wadis of the EDS survey areas. An additional two boats with two fronds, rather than the three common at Kanais, are located at Hierakonpolis (Figure 7.36) and a further two at El Hagandia in the same general area (Červíček, 1974: abb. 111 & 120). These and the Wadi Shait boat (Figure 7.27) represent the southernmost location of images of this vessel, in contrast to the Naqada III triangular stern and pharaonic vessels which are generally found in the Nile Valley, at ‘Dominion Behind Thebes,’ and in Nubia. However, Darnell (2011: 1158) illustrates a clear example of a ‘three frond’ boat near the Wadi Alamat Road, not far from Gebel Tjauti to the west of Thebes, noting that at one particular site, WHQ-3, “vessels with tall, straight sided, peaked cabins, longer hulls and palm fronds on the prows (in other words-those identified in this study as ‘frond’ boats) are the vessels of choice” (Darnell. 2011: 1157). Thus, predynastic ‘frond’ boats are found both east and west of the Nile in the desert related to the core Naqada I-II a/b Naqada cultural area.

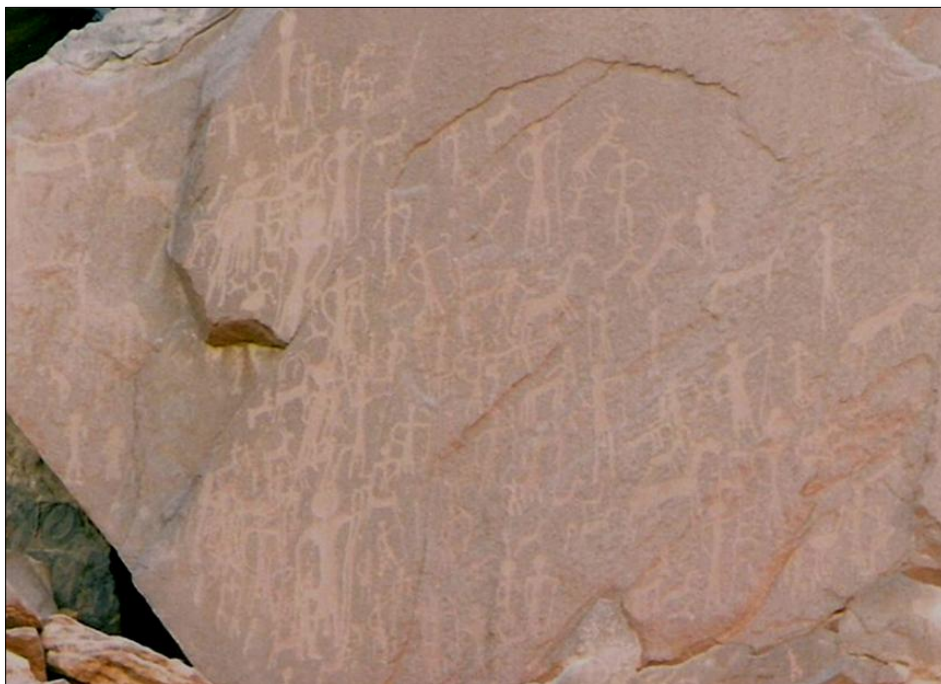
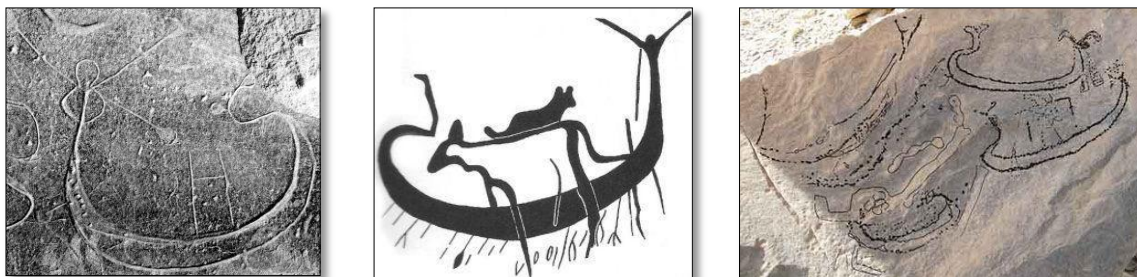


Figure 7.33. Major hunting scene, Wadi Midriq, photo courtesy C. Hanson



Left: Figure 7.34. '3 Frond' boat at El Hosh, Winkler, 1938: pl. XV, Centre: Figure 7.35. '3 Frond' boat near Gebel Silsila, Červíček, 1974, abb. 244, Right: Figure 7.36. Two '2 Frond' boats (right), Hierakonpolis, Friedman, 2008: 24

7.6 Overview & Discussion

7.6.1 Site Location, Orientation and Height

7.6.1.1 Location of Sites Within the Wadis

It is clear that the rock-art evidence is not evenly spread over the wadi system or within each wadi. Most of the petroglyphs, and all of those identified as predynastic, are situated on the sandstone ridge running NNW through the Central Eastern Desert. Even within this restricted area, the distribution of sites is further limited. They tend not to be spread out evenly along the wadis. Predynastic sites tend to be found in clusters, even in wadis connecting directly to the Red Sea. The clustering is most obvious in Wadis Baramiya and Umm Salam in the south and Hammamat in the north, in certain sites at or near the entrances to side wadis. This is the case particularly in Wadi Hammamat where half the sites are at or near the side valley Wadi Kue. However, the early two sites in the stone quarries, one with 'arms raised' figures, mark the eastern extremity of any desert rock-art. It is unlikely that the hunters would have reached this point and no further as the Red Sea Hills would have been home to at least ibex and gazelle. The clustering of predynastic sites appears to represent hunters' making the images at shaded rest stops, and also in some elevated lookout positions and ambush points near side wadi entrances. In the case of Wadis Baramiya and Umm Salam there are a small number of sites which point to hunting routes further through the wadi system. Indeed, in Baramiya there is a large 'signpost' into the Kom Ombo Drainage Basin wadis which have petroglyphs stylistically similar to those in the survey area, and especially in the southernmost part of it.

In order to comprehensively examine the pharaonic presence in the desert, it is necessary to combine the rock-art sites with hieroglyphic inscriptions (using Rothe, 2008). These indicate that pharaonic and Greco-Roman activity describes routes to the Red Sea, but mainly to the

gold mines. The sites in Baramiya and Hammamat, indicate both journeying to the coast and also to the mines/quarries in direct routes to the sea. Baramiya in particular operated as a junction for routes going north and south. In addition, the Greco-Roman 'road' to Berenike from north to the south-east is a major route in this period and especially accounts for 'Late' sites in Wadis Qash, Abu Wasil and Mineh. But this is not the only late activity, as contrary to expectation Wadi Abu Mu Awad, which lies between the other west-east wadis Umm Hajalij (N) and Salam, has petroglyphs which are overwhelmingly pharaonic in date. Its use as a route to the mines east of the survey area in Bir Dagbag accounts for this. Some pharaonic sites, particularly in Wadis Baramiya, Hammamat, Abu Wasil and Mineh are located at or near early motifs at shaded sites with vegetation.

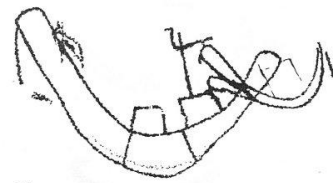
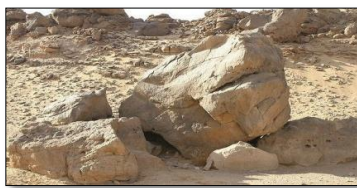
7.6.1.2 Orientation of Sites

Not every suitable rock surface was used, and this is particularly notable in the southern wadis where there is a strong tendency for rock-art sites to face 'North.' It is overwhelmingly the case in Wadi Umm Salam and adds to the stylistic evidence that this wadi was mostly frequented by different rock-art creators than the other southern wadis where a 'North' facing bias is evident, but not so overwhelming. It is notable that while different groups of hunters frequented these wadis, most preferred the same orientation. The dominance of sites facing 'North' is confined to predynastic sites and, moreover, to those predynastic ones in the southern wadis. This is despite finding similar early motifs, particularly the 'frond' boats, all over the survey area. In the central region the even more evident clustering of sites than overall in the survey area accounts for the smaller proportion of 'North' facing sites, although they still outnumber 'South' ones by 2:1. However, in this region predynastic sites are not necessarily orientated overwhelmingly 'North.' In Wadi Mineh the opposite is the case, whereas in Abu Wasil, although 'North' facing sites predominate, the major ones: WAS-10 and 16, are directed 'South.' Another motivation operated in orientating the petroglyph scenes here than in the southern wadis and suggests differing groups of people operating in different wadis.

7.6.1.3 Site Heights

The vast majority of sites are found at a low level because this is where the most suitable rock surfaces are located in the often narrow wadis. Higher levels are usually inaccessible. There are seventeen sites where there is a mixture of clearly identifiable predynastic and pharaonic

images. At all but two both sets of images are at the same level and clearly there was sufficient room on the rock face to accommodate the petroglyphs created later. In both these exceptions, at HAM-4 (RME-2) and HAM-8 the predynastic petroglyphs are at a 'Low' level and the pharaonic images above them. In the case of HAM-4 the inside of the cave (Figure 7.37) created by boulders is covered in animals, and two 'frond' boats of early predynastic date (Figure 7.38). Boat images similar to those in Tomb 100 and on D-Ware pottery are found on top of the boulders (Figure 7.39). The late Naqada II petroglyph creators evidently scrambled on top of the site in order to find the space to place their images. At both of these sites dating is possible because the boat images have clear Nile Valley parallels anyway.



Left: Figure 7.37. HAM-4 site view, author's photo Centre: Figure 7.38. Inside 'cave,' Morrow & Morrow, 2002: 209, Right: Figure 7.39. Top of site, Winkler, 1938

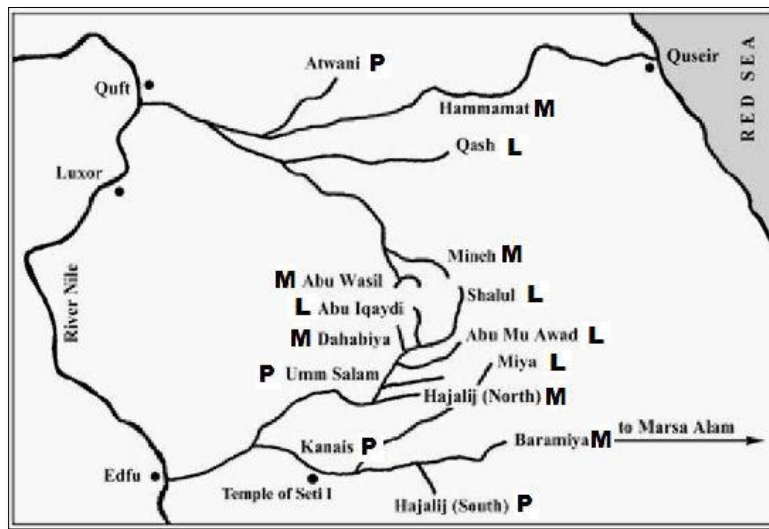
The profusion of 'Low' sites can be explained by the narrowness of many of the wadis, the lack of suitable 'High' rock surfaces or ability to climb them, but above all by the number of boulders in front of the cliff face in many areas. It is typical in the survey area for a site to consist of a cliff face accessible by a sand or scree ramp with boulders in front. 48 (20%) of the petroglyph sites consists entirely of boulders, while an additional 15% (37) comprise a main rock face with boulders to the front and/or side. Thus, over a third of the sites have a component of boulders, which usually rest on or near the wadi floor. Wadis Umm Salam (a-12/b-20), Abu Mu Awad (a-9/b-1) and Abu Iqaydi (a-7/b-4) have considerable number of sites entirely on boulders (a) or both a main face and boulders in front (b). In the latter two wadis boulder sites outnumber those on a wadi rock face. On the other hand, Wadi Abu Wasil's sites are overwhelmingly (20 out of 26) on the main rock surface. Overall in the Central Eastern Desert there are 19 sites under overhangs and 10 cave sites; the latter often formed by fallen boulders. These usually have large numbers of petroglyphs from varied periods. Overall, 79% of the 'Low' sites are from one to two metres above the wadi floor and thus at eye level. The remaining fifth, located up to five metres, are invariably accessible by an easily walked or clambered scree/sand slope.

Except for Wadi Hammamat, where a number of sites have early images near the wadi floor and pharaonic ones above them, and where pharaonic images of Min and cartouches are placed at higher levels, most of the rare 'High' sights are early and appear to be good look-out positions for hunters. A number of the higher sites stand out for their unusual character. The profusion of 'frond' boats at KAN-2, including some voyaging on cracks in the rock, and the two sites in Wadi El Atwani with unique motifs, could have been made nearby, or underneath, at a lower level. Atwani has the highest percentage of 'High' sites in a wadi, although wadi Mineh has the largest number. The Kanais and one of the Atwani 'High' sites contrast with most other elevated ones in that they are on sheer faces, rather than being accessible by a slope. In most cases the images on 'Medium' and higher sites can be seen by travellers walking along the side of the wadi in the shade, rather than those taking a direct route down the middle of the valley. The 'pointing' sites (to side wadis) BAR-4 and SAL-35, the very high (25 metres up) MIY-1 near the junction with Baramiya, and the two Atwani cliff face sites are exceptions.

7.6.2 Dating

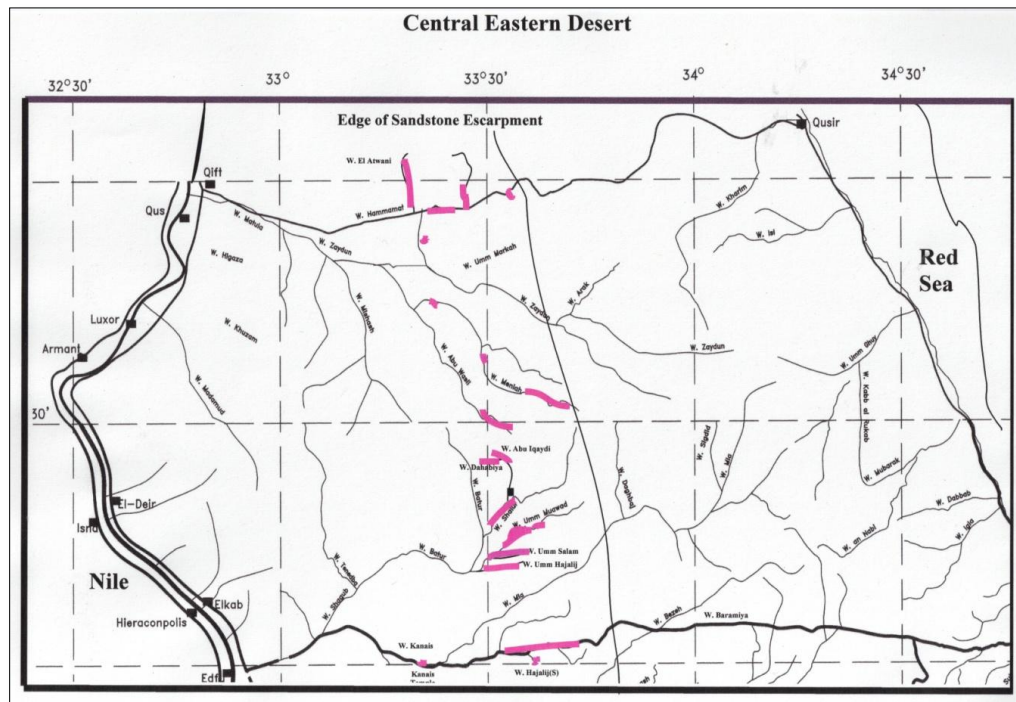
7.6.2.1 Dating the Regions

73% of Central Eastern Desert sites can be dated (see Table 1) and the numbers of 'Predynastic' (75) and 'Late' (83) sites are almost balanced (with 21 'Mixed'). These are outlined in Maps 7.12 and 7.15, and in Table 7.5. It is clear that sites according to date are not distributed evenly, with a concentration of early sites in the southern and north-central wadis, and of late ones in the central core, with a balance in the northern area. There are differences in the proportion of Predynastic versus Late sites in the three areas (Map 7.10). In the southern wadis, 'Predynastic' sites outnumber 'Late' ones 4:3, but in the central wadis the 'Late' sites dominate by 2:1. In the north they are almost equal with 'Mixed' sites (9 Predynastic, 8 Late, 8 Mixed). In the South, Wadis Hajalij (South) and Umm Salam overwhelmingly have 'Predynastic' sites, while in Baramiya they just outnumber 'Late' ones. Wadis Miya and Abu Mu Awad have mainly 'Late' sites. The core central Wadis Abu Iqaydi, Dahabiya and Shalul have a ratio of 4:1 'Late' sites to 'Predynastic' ones, whereas the northern central wadis are virtually balanced. In the northern wadis there is a considerable percentage of Mixed sites, especially in Wadi Hammamat.



Map 7.10. Dating of each wadi according to date of all images: P=Predynastic, D=Pharaonic, M=Mixed

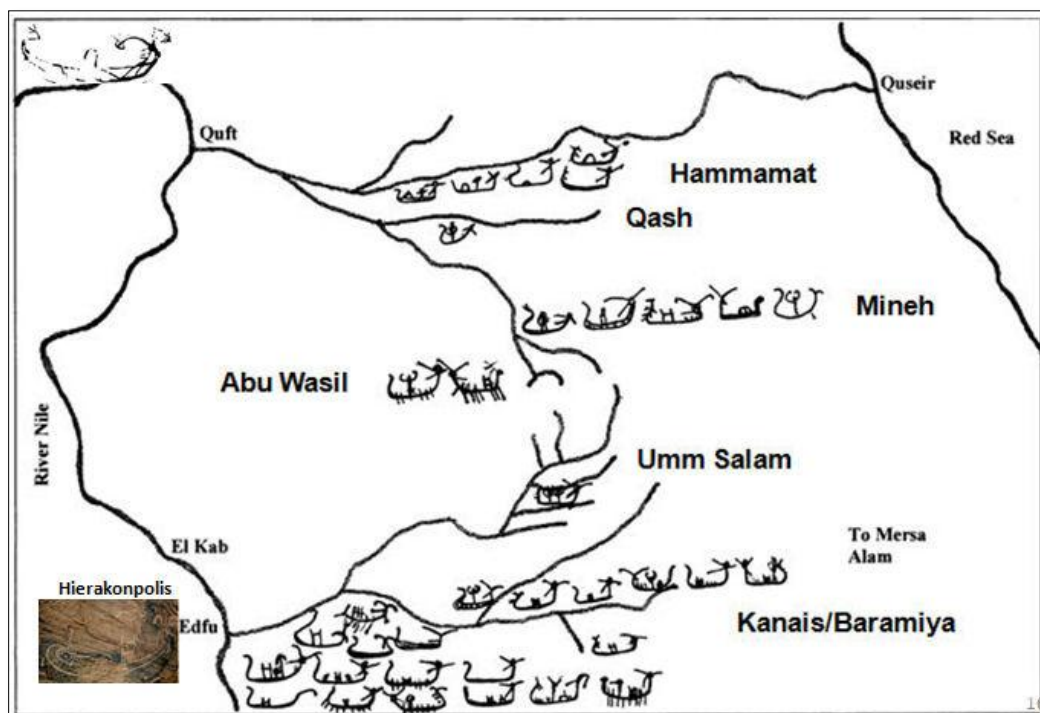
There is a pattern of increasing numbers of ‘Late’ sites as one moves north from the southern wadis into the core central ones. Predynastic images are concentrated in the area of Wadis Kanais/ Baramiya /Hajalij (South)/Umm Salam, and the first site in Wadi Miya near to the junction with Baramiya. All the other dateable sites in Wadi Miya, going north and a distance from MIY-1, are ‘Late.’ The central wadis have far fewer predynastic petroglyphs than the other areas, and many of the horse and camel rider figures are located there. They include scenes of what may be fighting. These are unique as there is no sign of conflict in the petroglyphs of any other period. Thus, if the lack of images is evidence that early travellers did not go there much, there is a hiatus between north and south in the survey area represented in the predynastic petroglyphs. It appears unlikely that groups of early travellers passed from north to south and vice versa. In the predynastic era it seems that there were no major settlements in the Nile Valley opposite the central desert area. It is therefore unsurprising, in addition to conditions underfoot being not conducive to travel, that there are no entry points directly into the central area and therefore a related lack of early petroglyphs in this area compared to south and north (Map 7.11). Since Gebel Shalul is a route connecting the northern and southern halves of the survey area, and where there was a well in antiquity, we might expect to find petroglyph sites in this part of Wadi Shalul. However, this is not the case as there are none. The main pharaonic and Greco-Roman route was therefore to the west and it appears not to have been a predynastic route.



Map 11. Distribution of major Nile Valley settlements showing gap between prominent early locations Hierakonpolis & Armant and relation to predynastic rock-art, after Rothe et al 2008.

The two major wadis which directly connect the River Nile with the Red Sea, Wadi Baramiya in the south and Hammamat in the north, have a near balance of early and late sites, since they are main routes to mines, quarries and the Red Sea. Wadi Baramiya was the main route from Edfu and El Kab into the heart of the Eastern Desert and therefore has twice the number of sites than Wadi Hammamat. It is also the route northwards and southwards to concentrations of gold mines. There are many pharaonic inscriptions in the greywacke quarries in Wadi Hammamat and Baramiya also has a considerable number (Rothe, 2008). Hierakonpolis and El Kab were prominent settlements and elite centres in the Naqada era. Hierakonpolis is located on the west bank of the Nile opposite Edfu, which is a major entry point into the desert and was politically important in the predynastic period, whereas Edfu only apparently became prominent in pharaonic times. It is apparent that there is a clear stylistic relationship between 'frond' boat petroglyphs at Hierakonpolis and those in Wadis Kanais and Baramiya. There is also a concentration of these boats in the four southernmost wadis (Map 7.12). Southern wadis make up seven of the fifteen in the survey area, so the predominance in the amount of petroglyphs (60% as opposed to just over 50% of sites) could be ascribed to this percentage representation of the total number of wadis. However, Naqada and Abydos in the north were also important predynastic centres on a par with Hierakonpolis and El Kab. So there could have been considerable activity into the desert originating from

these places, especially from Naqada since it is nearly opposite Qift, which constitutes an entry point into Wadi Hammamat. The presence of some ‘frond’ boats, ‘arms raised’ figures and the Type I sickle boats, with ‘standards as seen on the D-Ware, in the northern and north-central wadis shows that people of the Naqada culture were active there, but either not to the extent as in the southern wadis or that they revisited traditionally established sites. An interesting fact is revealed by an examination of C and D-Ware pots found at near neighbours Hierakonpolis, Adaima and Ma’ mariya. These combined have only 16 out of the total of 274 provenanced vessels which have painted illustrations, compared to 180 in the Abydos-Naqada region where there are far more major settlements (Graff, 2009). Yet there is much more predynastic rock-art in the desert opposite the southern Nile Valley sites. The balance of power between Hierakonpolis and This, the yet to be located population centre of the Abydos ‘U’ and First Dynasty cemeteries, is not clear in the Naqada period until This becomes predominant in Naqada III. Although This/Abydos are removed from the Eastern Desert, Naqada is close to it. Therefore, we might expect a considerable amount of rock-art in desert areas in its vicinity. However, judging by the amount of petroglyphs and the ‘Integrated’ scenes in the southern wadis, hunters from southern settlements were more active in the Predynastic than those from the north of the survey area.

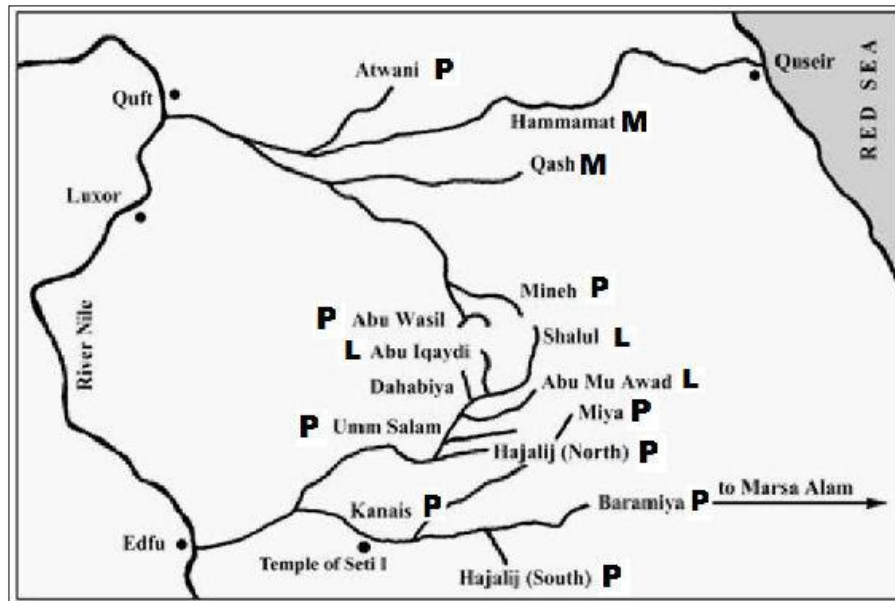


Map 7.12. ‘Frond’ boats distribution in the Central Eastern Desert showing presence all over the survey area but particular concentration in the south opposite Hierakonpolis where related boat images are found at HK61

7.6.2.2 Balance Between Predynastic & ‘Late’ Boat Sites

Considering the boat images separately, sites with ‘Predynastic’ examples outnumber ‘Late’ ones by 67: 47. Thus all but 7 predynastic sites are dated mainly by boats, while the presence of pharaonic figures, falcons and association with lettering or late dated animals increases the number of ‘Late’ sites considerably by 34. It is also notable that not only can 3.5 times more boats be assigned a predynastic date than a dynastic one, but pharaonic vessels usually appear in ones or two’s at a site, whereas large numbers of predynastic boats are often found together. Of the 17 sites with 10 or more boats, 13 are of early date, with only cave sites MIN-14 and QAS-3, in addition to MUA-10 and HAM-13 having mixed predynastic and dynastic vessels. All but two of the predynastic concentrations are in the south. Pharaonic boats tend not to be associated with animal depictions-in stark contrast to predynastic sites, or are situated on the edge of an animal scene rather in the midst of it. This difference in number of portrayals and placement on the rock surface suggests that predynastic and dynastic boat petroglyphs have a different function. The three highest number of pharaonic boat images are in Wadis Baramiya, Hammamat and Abu Mu Awad.

All three are main routes to the gold fields or quarries. The only wadis in which there are none are Hajalij (South) and El Atwani, neither of which are a route to the mines and overwhelmingly have predynastic sites. There is only one pharaonic boat at Kanais compared to more than twenty predynastic vessels, and perhaps surprisingly it is located on the opposite side of the wadi from the temple of Seti I and its associated well. So just because there is a major pharaonic feature does not necessarily mean that a pharaonic boat petroglyph will be found there. In Wadi Miya the sole predynastic site is at the southern wadi end close to the junction with Baramiya, while the pharaonic sites are well to the north-west on the way to a marble quarry at Gebel Rukmam, and further to the gold mining area around Bir Dagbag. The connection with mining is enhanced by a dynastic image behind mining buildings at Bakariya (Figures 7.39 & 7.40), north-west of Bir Baramiya and just outside the survey area. Given that the pharaonic navy organised transport through the Eastern Desert, at least some of the pharaonic boat images may therefore be the work of transportation teams (Tratsaert: 6, in press). It is clear that in terms of boat images the content of the southern sites is overwhelmingly predynastic, while the central wadis overwhelmingly have late motifs. The situation in the northern area is mixed (Map 7.13). Wadis Qash and Hammamat have considerable numbers of both early and late images, while El Atwani has no late boats at all.



Map 7.13. Dating of each wadi according to date of boats: P=Predynastic, L=Late, M=Mixed, (Dahabiya excluded due to small number of boat images)



Left: Figure 7.39. 'Late' boat petroglyph behind mining huts, Wadi Bakariya, Tratsaert: 7, in press, Right: Figure 7.40. Detail of boat, Wadi Bakariya gold mine, photo courtesy Barbara Tratsaert

7.7 Conclusion

In answering the questions, "Why are the petroglyphs located where they are?" we can divide the predynastic and pharaonic examples since there are different reasons for their location and creation. As a conclusion to the analysis in this chapter one can argue that predynastic sites tend to cluster around well-watered areas and often by side wadis, especially in the south (Table 7.5). Despite the lack of archaeological context in the Eastern Desert, it is probable that predynastic people gathered at rock pools such as at SAL-14 and sites with groundwater, such as WAS-10 where, after rainfall, pools and mini-lakes would have formed from run-off from the steep wadi sides. The mass of images at SAL-14, with many superimpositions, lie on the path of a considerable number of sites; forty-six in all, in the Wadi Umm Salam. These sites occur along a quite straight wadi over a distance of only ten kilometres, suggesting

casual sites where small groups of hunters stopped in the course of their usual patterns of mobility.

Area	Location	Height	Orientation	Activity	Date Boat Sites	Date All Sites
Northern	Shade/Hammamat & Qash routes to Red Sea and Berenike/Often near side wadi	Low-some higher sites in Wadi Hammamat	North/South / West equal	Little hunting/ Pharaonic figs. esp. in Hammamat	Majority Late/ Pharaonic	Majority Late/ Pharaonic
Core Central	No pattern	Low	Higher % East -West than elsewhere	Little hunting	Few Predynastic	Late/ Pharaonic
Northern-Central	Shaded spots/ Wadi Mineh road to Berenike	Low	Balanced N/S	Hunting/ Boat scenes/ Horse & camel riders fighting in Wadi Mineh	Majority Predynastic	Mixed
Southern Core	Shaded spots/ Near side wadis & vegetation	Low	Predynastic North	Hunting/ Hand on hip figs./ Boat scenes/ Frond Boats	Predynastic	Majority Predynastic
Umm Salam & Hajalij (N)	Shaded spots/Near vegetation	Low	Predynastic North	Hunting/ Boat scenes	Predynastic	Predynastic
Mu Awad	Spread out	Low	Balanced N/S	Little hunting	Late/ Pharaonic	Late/ Pharaonic

Table 7.5, Character of areas in the Central Eastern Desert survey area

Most of the Central Eastern Desert sites are concentrated in a compact area. From the Wadi Mineh down to the Wadi Baramiya, they lie in a rough rectangle only approximately fifteen by forty-five kilometres. Since 85% of the Eastern Desert sites are 'Low' (1-5 metres), the

vast majority of them appear to be brief stopping places en route to hunting grounds, given the plethora of hunting scenes. In particular, keeping look-out at the entrance to a side wadi, the expectant hunter(s) would have had time to create petroglyphs showing the hunt and their prey. Many sites are closely associated with vegetation and are at or near the entrances to side wadis in both the southern wadis generally, and in Wadi Hammamat in the northern region. In the southern wadis there was a very significant preference by the petroglyph creators for sites facing 'North,' whereas in the rest of the survey area no pattern can be discerned. This accentuates the contention that there is a division between the northern and southern halves of the Central Eastern Desert.

The southern wadis Baramiya, Hajalij (N) and Umm Salam are characterised by large numbers of hunter petroglyphs. It is difficult to track any similar style of figures through the survey area within the broad figure types with a sole exception. The hunter with one hand on hip holding a bow and a carefully hammered round head is found in Wadi Baramiya but also north in Wadis Miya (MIY-1 only) and Umm Salam, and south into Hajalij (S) and on into Wadi Midriq in the Kom Ombo Basin. We can also see a 'frond' boat of Baramiya style at Umm HAJ (S)-2. Otherwise, the impression, even of the southern east-west wadis, which are easy to travel in and provide many suitable surfaces, is of very small groups of people making petroglyphs at a particular site. It is only in the pharaonic era, where travellers inscribe their name and title, when identifiable individuals can be traced across through the wadis. In addition, the scarcity of Naqada II c/d and III images, especially boats, and a concentration of what are arguably late Naqada I c-II a/b boat scenes means that much of the predynastic activity leading to the creation of rock-art is concentrated in a comparatively short period; perhaps less than two hundred years. Therefore, proportionately there are many more sites and petroglyphs from this time than the next five thousand years. Reasons why this was the case are considered in Chapter Eight.

Chapter Eight

Interpretation

8.1 Introduction

The aim of this chapter is to examine the reasons for the creation of the rock-art of the Central Eastern Desert, both in the predynastic and pharaonic periods. That depictions of animals, people and boats have been hammered on rocks in Egypt is not surprising, but their presence in the desert is. This is particularly notable concerning the boat images in what was always a semi-arid area. I will especially focus on the associations and ‘impossible combinations’ of animals, human figures and boats in the middle of the desert. In proposing explanations for this and the later dynastic motifs an integrated approach is taken, relating the images on the rock surfaces to those on Nile Valley artefacts, and to Egyptian iconography and ritual. Here it must be noted that the cultural milieu of the predynastic and pharaonic eras were different, and that in the latter period-although quarrying for temples and tombs was important, utilitarian factors seem to have been of greater importance in the creation of the rock-art.

The reasons for the creation of the pharaonic petroglyphs are easier to explain than the early images. Although pharaonic scenes include boats, dynastic boats are usually not found grouped together in large numbers, unlike the predynastic examples. In addition, there are none in ‘Integrated’ scenes [i.e. those where boats, human figures, and animals being hunted constitute a single composition], and also few boats are associated with animals. Many of the late images also have hieroglyphic inscriptions nearby and consist of easily identifiable elements such as Horus falcons, Min figures, ‘Djed’ pillars, or realistic human figures which can be compared with examples in dynastic tomb paintings. As noted in Chapter Seven, dynastic boat petroglyphs tend to be distributed along wadis which lead to mines and quarries. Therefore, a (largely funerary) ritual explanation for their creation is less likely and a motivation related to mining and quarrying activities is more probable, in contrast to activity in the predynastic period. The horse and camel riders are often shown engaged in

conflict. This activity is unique to these figures, nor are they associated with boats, suggesting a different reason again for their creation.

Despite our knowing much about the world-view of dynastic Egyptians, we cannot simply read back their values and perceptions into the predynastic era. This affects all cultural aspects, including rock-art. It is necessary to take account of the social and political context in which the predynastic petroglyphs were generated. They were produced in the very early state formation period before the unification of Egypt. Far from being a centralised state, it has been suggested that a number of polities existed, with social stratification markedly increasing from the middle Naqada II period (Hendrickx, 1999: 5). For the Naqada III b period ('Dynasty O'), a smaller number of 'proto-states' have been reconstructed, perhaps based on Naqada, Hierakonpolis and This (Kemp, 1989: 34). It is theorised that these centres competed for control of natural resources and trade routes in order to command the prestige goods necessary for gift giving, the forging of alliances, and funerary purposes. Later, they coalesced to form a unified Egyptian kingdom under the leadership of 'Narmer,' the first ruler of the First Dynasty, c.a. 3050 BCE (Wilkinson, 2000b: 2).

The institution, ideology and iconography of kingship seen in pharaonic Egypt developed over a long period in the predynastic era, with hunting as an elite activity shown on C-Ware pottery as early as Naqada I. Therefore, the early dynastic state and its iconography stand at the end of the period in which many of the petroglyphs were created. From Naqada I, developments in the Nile Valley associated with desert activity have been described as 'urbanisation of the dead' (Wengrow, 2006: 72). The elite dead were interred in increasingly elaborate cemeteries, such as at Hierakonpolis, a key area for this research. I would argue that it is necessary to examine the meanings residing at the synchronic and immediate level of the images on the rock and connect these to the cemeteries and the objects found in tombs. Firstly, previous attempts at explaining the predynastic desert petroglyphs are outlined and suggestions made concerning why they are insufficient as a tool for interpretation. Next, key themes which link valley and desert in the predynastic period such as hunting and death are examined. How these relate to Egyptian funerary practice through the association of boats with hunting and 'dancing' figures in the rock-art is then explored. Following this, from these themes I will propose an explanation of the associations and 'impossible combinations' in the rock-art. Finally, I will examine and explain how some petroglyphs are related to utilitarian

use of the landscape, demonstrating connections between Central Eastern Desert petroglyphs and activities carried out especially by the pharaonic and Greco-Roman state.

8.2 Previous Interpretations of the Predynastic Rock-Art

A number of theories have been put forward for the presence of boats and associated images in the desert. Most of these have been grounded in what is known of elite behaviour and religion in the early dynastic period or even as late as the Fifth and Sixth Dynasty Pyramid Texts. The origins of themes identified in these periods are then projected retrospectively into the Predynastic. Here I demonstrate why this approach cannot be applied to the themes in the early rock-art.

8.2.1 Narrative

It has been suggested that the predynastic rock-art tableaux represent stories about journeys through the Eastern Desert, including feats of endurance and adventure, and therefore have a narrative character (Wilson, 2003: 6). However, the association, and, in particular, the integration of motifs and the prominence of hunting/dominance over the animal world, in addition to physical control of animals, argues against this. While in the ‘Associated’ scenes [i.e. those where boats are adjacent and related to animal/hunting portrayals of the same patination] we might be looking at valley and desert depicted separately, this cannot be the case in the ‘Integrated’ examples. The focus is on the action of boats, hunters and animals combined in the desert-an ‘unrealistic’ combination, not an individual or group on a journey.

The ‘unrealistic combinations’ also exist in the Nile Valley material culture beyond the rock-art, such as on the Gebelein Linen and the T100 wall painting, and in both these cases we also have the presence (and perhaps the mediation) of dance. These are the only large-scale survivals of what may have been more extensive examples of media used in a funerary context. Given that, in addition, we have related combinations of images on the D-Ware pottery, we can see a relationship between the depictions on all these media. In all these examples it is the combination of images, and the activities they engage in, which matters above all.

8.2.2 Cosmology

Some writers have interpreted the predynastic rock-art as part of the cosmology of religion. Pavel Červíček (1993) placed the origin of the solar ‘depet’ and ‘weja’ barques, in which the god Ra crossed the sky and into the otherworld, in the rock-art boat depictions. Moreover, he claimed that the barque, “with incurved stem and stern paralleled on the Naqada D-Ware anticipates another solar barque”-the barque of Sokar illustrated on the Fifth Dynasty Palermo Stone (Červíček, 1993a: 44). This interpretation seems problematic as the latter source dates from more than a thousand years after the majority of the Central Eastern Desert petroglyphs’ creation, and any supposed similarity is likely to be influenced by a retrospective perspective. He related the figures with incurved arms above the head in the rock-art to the D-Ware pottery because of the association with the boats on these pots, and therefore proposed a solar function for these figures too. Červíček based his interpretive work on the Frobenius and Winkler archives. He had access to Winkler’s archive at the EES in London and Winkler’s original notebooks and was also familiar with the UNESCO rescue expeditions’ work. Thus, he studied a considerable range of rock-art including Lower Nubia, the western oases, and a part of the desert. In addition to employing a cosmological approach to interpreting the meaning and purpose of the rock-art, he was still influenced by Petrie’s now discredited view of a Dynastic Race coming into Egypt to ‘bring’ civilisation. Relying on this view he saw the square boats as a foreign type.

Unfortunately, Červíček’s approach ranged too broadly, as he saw relationships between boats in the rock-art and later solar motifs which are unlikely to be there. Dynastic motifs, identifiable from features such as sail and steering oar, can be properly related to boat models, tomb paintings and reliefs on stone. They may be secular trading/cargo vessels. Or, in the case of boat models, they are perhaps vehicles for the deceased to sail to Abydos, as well as being an item which he was simply expected to have as equipment for the afterlife. The cosmological approach of identifying boats in the rock-art as solar barques is further undermined by the lack of evidence for the primacy of solar religion in the predynastic era. Apart from two C-Ware depictions of the sun between triangles, probably representing mountains, (Graff, 2009: 198, 235) there is little evidence of a solar motif on early Nile Valley media, nor does it appear at all on the D-Ware pottery. The main connection in the rock-art is between boats and hunting.

The solar cult “always appears to be linked to a political purpose and seems to have been introduced by a king or state” (Cervello-Autori, 2011: 1126). Thus, a final reason against a cosmological approach relates to the comparatively late date at which a solar element can be clearly identified in the Nile Valley culture. Royal domain names either place Horus (the ruler) at the centre of the corporation of gods in the First Dynasty, or increasingly emphasise a stellar role into the Second (Wilkinson, 1999: 121). The element ‘Ra’ only appears in the Horus title of a single king in the Second Dynasty: ‘Raneb’ (sometimes read as ‘Nebra’). Various translations as ‘[Horus is] lord of the sun,’ ‘the sun is lord,’ or ‘Ra is (my) lord’ there is no consensus concerning even how this title is to be read, or on its meaning, given that the prevalence of solar religion (as royal ideology) does not appear until the Fourth Dynasty (Wilkinson, 1999: 84). Even Kahl (2007), who claims a growing influence of Ra as sun-god from the Second Dynasty onwards, maintains a clear difference between this and the King’s identification with aggressive titularies of Horus in the First Dynasty. In addition, the nomenclature ‘Sa Ra’-son of the sun/son of the god Ra, does not appear before the Fourth Dynasty, more than a thousand years after the time of many of the desert petroglyphs. In the Pyramid Texts there are many references to solar barques and the religious themes contained in them are alleged to have early origins. But the texts themselves are found in late Fifth and early Sixth Dynasty pyramids. Therefore, they date at least from twelve to thirteen hundred years after production of much of the rock-art in the predynastic era, and after both ‘Unification’ and a long period of establishing a centralised bureaucratic state based around a divine/ cosmic king.

Petroglyphs from El Kab, on the east bank of the Nile, have also been interpreted by the Belgian recording team under the direction of Dirk Huyge (Royal Museum of Art & History, Brussels) as being part of an early Egyptian cosmology. In this scheme the giraffe, by virtue of its height, in its presence on Naqada III ceremonial palettes and also its role in the Old Kingdom, is seen as a ‘bearer of the sun’ (Huyge, 2002). By patination and various superimpositions giraffes are dated exclusively to Naqada I, the most significant motif in the oldest rock art horizon at El Kab. It is suggested that the animal appears as an intermediary between the earthly and heavenly spheres in order to act as a bearer of the sun god’s vehicle. 60% of the giraffe drawings at this location are orientated westwards, while 70% of other motifs, including prevalent asses, face to the east (Huyge, 2002: 200). In the El Kab interpretation, giraffe were bearers of the sun and asses, portrayed as epitomes of evil in several passages in the Pyramid, Coffin and Book of the Dead texts, are ‘way-layers of the

sun.’ They were, therefore, perhaps ritually destroyed in order to speed the sun’s progress. The giraffes were placed on the rock in an attempt to favourably influence the hazardous passage of the sun. The Naqada II petroglyph boats are likewise largely orientated westwards, the direction of the sun across the sky, and so are claimed as solar motifs. The club-ended Naqada II style vessel, seen in the Tomb 100 painting and in a few petroglyphs, is equated with the dynastic ‘Henu’ boat of the god Sokar, the ascending sun ship and a symbol of the rejuvenation of life. The arm position of the ‘arms raised’ figure with arms incurved above the head is also considered to be a sun-bearing posture.

It has already been noted that there is little evidence for the primacy of solar religion in the predynastic era. In addition, the contention that giraffes, due to their orientation, are generally bearers of the sun in this period is undermined by the position in the Central Eastern Desert where most face in the opposite direction (Judd, 2009: 13). Moreover, while giraffe petroglyphs are found at 45 Central Eastern Desert sites and asses at 40, they are rarely found together, as they are only associated at 4 sites and closely so at a single site. A cosmological association in the desert rock-art scenes is, therefore, extremely unlikely. In addition, the ‘arms raised’ figures in the EDS/RATS survey area are associated with a variety of boat designs and control of animals. Indeed, it is hunting and ‘controlling’ which are the major themes of the desert rock-art. There is thus no evidence that the ‘arms raised’ posture can be seen as sun bearing in the petroglyphs of the Central Eastern Desert, and it is unlikely that a cosmological approach could be a valid explanation in Egypt during this period.

Only a small portion of the El Kab rock-art has an affinity with the predynastic images in the Central Eastern Desert. Much more is dated to the later Naqada III period and the pharaonic era (Huyge, 2002: 197). Indeed, in pharaonic times the nearby gap in the mountains into the desert was known as “the Mouth of the Wilderness” (Weigall, 1909: 147). El Kab is very close to the Nile and its narrow band of cultivation. Unusually for post-Badarian sites, the town of El Kab and the nearby petroglyph sites in Wadi Hilal are on the east bank, adjacent to the desert. Therefore, we might expect to see a proportion of the motifs at El Kab related to those in the Central Eastern Desert petroglyphs and this may be the case. One figure with arms raised and hands turned outwards (see Figure 8.18 below) is associated with a hunting scene similar to those found in the desert, a variant of the ‘two frond’ vessel and a square boat below, which can be termed an ‘Associated’ composition (Figure 8.1). On another rock face there is a large sickle boat with associated animals (Figure 8.2). The other four ‘arms

raised' figures present are associated with only one quadruped (see Figure 8. 17 below). This is in contrast to most predynastic scenes in the desert where the figures are usually among or near a considerable number of animals and boats-although there is one such example in Wadi Umm Salam (SAL-20).



Figure 8.1. Boats and animals at El Kab on 'Rock of the Vultures' below scene in Figure 8.18, photo courtesy Dirk Huyge.



Figure 8.2. Sickle boat and hunting scene (without human figures), El Kab, author's photo

Predynastic Egypt was host to varying funerary practices (ranging through masks, mat wrapping and decapitation of select corpses) and was a fast-changing society in the state formation period (Wengrow, 2006; Droux, 2007 & 2010). It is therefore likely that there could be differences in belief throughout the Naqada culture area and that sites such as El Kab did not exactly mirror the range of motifs apparent in the desert rock-art. This is exemplified by the fact that El Kab has only giraffes, which are dated to Naqada I by the

recording team, as well as Naqada IIC/D sickle boats. It also has no bovids dated before Naqada III, in contrast to the early hunted examples in the rock-art (Huyge, 2002: 197). On the other hand, Hierakonpolis has a number of ‘frond’ boats associated with animal depictions near the earlier settlement adjacent to the wadi system, but no boat images dateable to Naqada II c/d (Hardtke, 2009). Three comparable images are recorded by Červíček (1974) in the Wadi Sharab, which links El Kab to Wadi Baramiya, where three similar boats are present at BAR-1 (Červíček, 1974: Abb. 428). Sickle boat images akin to those on D-Ware are very rare in the EDS/RATS survey area and usually not closely associated with, or integrated into, hunting scenes, which mirrors the case on the D-Ware pottery. Thus, both Hierakonpolis and El Kab have motifs which link these settlements to the early predynastic petroglyphs of the Central Eastern Desert.

In summary, none of the previous suggested explanations of the predynastic desert rock-art’s creation by Wilson (2003), Červíček (1993) and Huyge (2002) can be sustained and a different entry point for an attempt at interpretation is necessary. The widest possible corpus of the Central Eastern Desert petroglyphs has been assembled in this study, with reference to the related material in the Kom Ombo Drainage Basin. This resource provides a comprehensive evidence base to compare with images on Nile Valley media over a wide period of time. In making this comparison it is argued here that a retrospective view from the pharaonic era locating the origin of dynastic motifs in the predynastic is unpersuasive. Instead, it is necessary to examine the prevalence of hunting images associated with boats and the ‘arms raised’ figures in the rock-art and to look at comparative themes on pottery and other objects, especially from funerary contexts, from the Nile Valley.

8.3 The Integrated Approach: Linking the Rock-Art with Nile Valley Culture

In this section I link related themes in the Central Eastern Desert rock-art and on media from the Nile Valley which show boats, animals, and human figures involved in hunting and ‘dancing’ during the predynastic era. In particular, I explore motifs in the Gebelein Linen and the Tomb 100 painting and show that they have related themes to those in the rock-art.

8.3.1 Tomb Images

The motifs observed in the rock-art are also represented in the archaeological record on Nile Valley media and they can be seen in the Gebelein Linen and Hierakonpolis Tomb 100 painting. The Gebelein Linen shows a combination of a number of the motifs also found in the desert. This folded cloth came from an evidently elite but poorly recorded tomb at Gebelein, mid-way between Quft and Edfu, and has representations of an ibex, hippopotamus hunting and boats, together with an authority figure on board. On the Linen we can see ‘arms raised’ figures. The latter are part of a larger ‘dancing’ group and the figures have various arm positions in addition to some of them holding hands (Figure 8.3). This is the only example of a predynastic group dancing scene in the Nile Valley, but hints that the gesture with the arms incurved above the head could have been integrated into a collective dance activity in elite funerary contexts elsewhere in the valley. It is notable that, in contrast, the ‘arms raised’ figures in the desert invariably stand apart from each other, and apart from one Kanais site, not in a line. Dated either to Naqada I c (Adams & Cialowicz, 1988: 37) or II a (Graff, 2009: 171, Hendrickx, 2011: pers. comm.), the Linen is damaged, but contains the boat and hunting/ animal control and dancing combination seen in Tomb 100 and the rock-art.

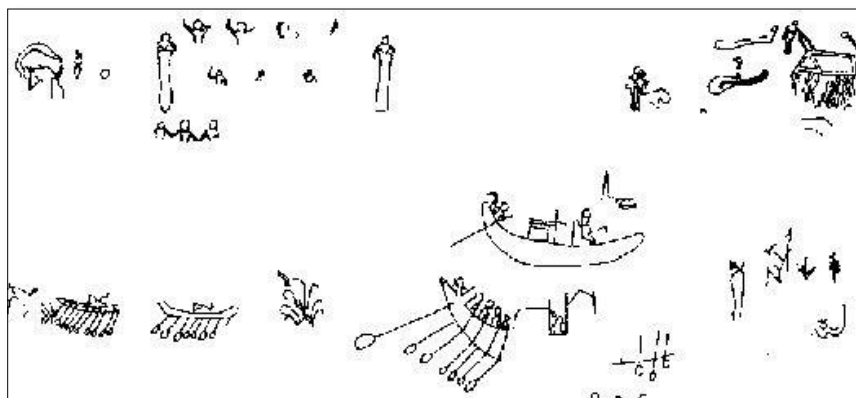


Figure 8.3. Gebelein Linen showing hippopotamus and ibex hunting, boats and dancers, Adams & Cialowicz, 1988: 37

The scene recorded from the burial chamber of T100 (Figure 8.4) has been interpreted as a barque procession and a precursor to an early pharaonic festival cycle (Williams & Logan, 1987), although the tomb is usually dated from its contents to Naqada II c (c.a. 3650 BCE, Hendrickx, 2006: 728). It is thus presented as being different in function to the images in the rock-art. The depiction is seen as a narrative rather than a dramatic intertwining of viewer and

viewed. Williams and Logan's interpretation of T100 in terms of 'smiting,' 'dancing' and the 'pharaonic cult cycle' are made within the confines of this approach. They divide the tableau into five sections (Figure 8.5), each representing one aspect of the later so-called pharaonic cycle and state that "it can be concluded that the Heb-Sed [a festival seen as accomplishing the ruler's rejuvenation], in its funerary context, already formed the central event in the greater cycle that outlined the expected duties of leadership that relate to the funerary complex at least by the end of Naqada I. It can also be concluded that many, perhaps most, Naqada period representations comprise fragments, extensions, elaborations, or abbreviations of that cycle whose major elements can be traced more clearly in great funerary/representational complexes of the Thinite period [Dynasties 1-2] and Old Kingdom" (Williams & Logan, 1987: 272).

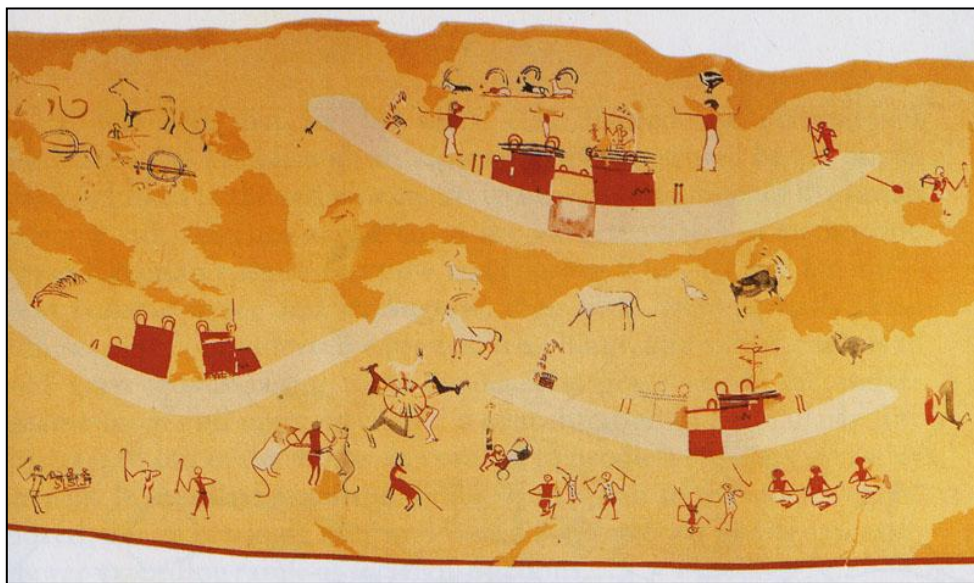


Figure 8.4. Painting from Tomb 100, Hierakonpolis showing boats, dancers, animal 'control,' desert fauna, bound prisoners, a smiting scene and probable stick fighting.

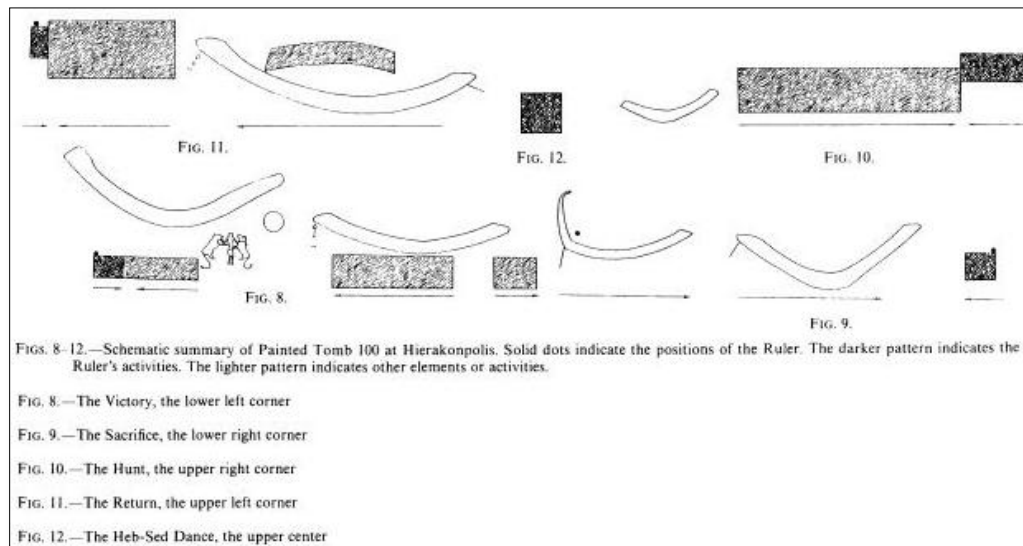


Figure 8.5. Diagrammatic representation of 'pharaonic cycle' interpretation of T100 painting, Williams & Logan, 1987: 277

Williams and Logan's view of the T100 painting obscures other explanations of the motifs in it, and these have a direct bearing on the interpretation of the petroglyphs. There is also no analysis of other features, for example if the painting represents an actual procession on the Nile, where is the representation of water? I would like to propose here that the Tomb 100 painting has a number of parallels to the way the petroglyph images are represented. Firstly, the boats in Tomb 100 appear to be sailing in the desert, as do the images in the Central Eastern Desert. They do not appear to have any means of propulsion, like the vast majority of the Central Eastern Desert boat motifs. The human figures appear to stand on deck and amongst the boats. Animals, including antelope, ibex, 'lions,' cattle and a desert bird are also present; as in the Central Eastern Desert images. The mix of animals (with three examples of animals being controlled by lasso, tether or trap), human figures and boats has similarities to the 'Associated' and 'Integrated' scenes in the rock-art. Tomb 100 does differ from the images in the rock-art in additionally having the bound prisoners and smiting scene, and some figures and a short row of animals on an early register line. It also lacks 'arms raised' figures in the classic pose. However, it does have figures engaged in a kind of dance with their arms held out horizontally. Furthermore, the panel is damaged, several images are incomplete, and therefore there is room for more elements in between the boats. There are also images of hunting and animal control in disparate parts of the painting, rather than being confined to recognisable panels within it. All of this militates against the ability to neatly divide the scene up into themes recognisable from the early dynastic period. The argument for the relationship to the Heb-Sed is called into question as it may actually have constituted a

celebration of the unity of the ‘Two Lands,’ either the ‘Unification,’ or the maintenance of the status quo (Krol, 2005). Therefore, since in this interpretation the Heb-Sed relates to the First Dynasty, the festival cannot have originated in the predynastic era and thus its origin cannot be traced retrospectively.

Regarding the predynastic boats, as explained in Chapter Six, their distribution and association with other images is not what we might immediately expect. Rather than being distributed simply on routes to the sea, they are concentrated in well-watered positions, often in shaded spots near side wadis and wadi junctions, and are associated with, or sometimes even integrated into, hunting scenes. The presence of boats and hunting in a funerary context is therefore important from a very early period in Egyptian history. This apparently unlikely combination is part of the ritual required to ensure that the deceased can participate in the afterlife in all the expected activities. The almost invariable presence of at least one single large figure on board also differentiates predynastic from dynastic vessels, although whether this represents the deceased, and/or mourners or ancestor(s) cannot be easily determined. The figure, larger in scale and often more detailed than others, may be exercising authority and directing the combined activity of boat(s), large central figure(s), hunting and (sometimes) ‘arms raised’ figures.

Given the prevalence of boats in the desert petroglyphs as well as on Nile Valley media, and the association of related images with funerary artefacts, an integrated approach is most suitably applicable concerning ancient Egypt. The petroglyph evidence is placed within contemporary Egyptian culture, and allows us to resist a retrospective look back from pharaonic rituals and iconography into the Predynastic. For example, to interpret boats on D-Ware and in the petroglyph scenes as akin to water-borne funeral corteges on the Nile in the pharaonic era risks trying “to force the well-structured elements of the pharaonic repertoire on to a cultural scenario which was still in its early stages” (Midant-Reynes, 2000: 191). It was often easier to travel by boat than by land, and the Nile provided a water highway potentially from Aswan in the south to the Mediterranean, although not without hindrance from unfavourable winds and shoals. In addition, given the inconsistencies in the boat representations in T100, the lack of water and the mixture of maritime and land activities, a narrative interpretation of predynastic media reading back from dynastic times is unpersuasive. Alternatively, we can better see the ‘canvas’ of the Gebelein Linen, the T100

painting, the C and D-Ware pottery, and the Central Eastern Desert petroglyphs as showing linked and related images and themes. Therefore, iconography from the Nile Valley, such as the Gebelein Linen and the Tomb 100 wall painting, is linked with contemporary portrayals of common themes in the rock-art of the Central Eastern Desert.

8.3.2 Hunting as Elite Behaviour

How can we account for the presence of the combination of boats, hunting and ‘dancing figures’ in both the rock-art and the Nile Valley? This section will attempt to answer the question by looking at hunting images on a variety of media. Hunting imagery is found in the Central Eastern Desert over millennia and in many dynastic tomb paintings. There are 12 examples of hunting hippopotami and crocodiles in the Naqada I-II a C-Ware, and 20 vessels portraying hunting with dogs or by dogs alone (Graff, 2009). This includes several with the prey being grasped, as occurs in the desert scenes. Dogs also occur quite frequently on later ivories, but usually at the end of a neat row of animals seemingly controlling them, and also on palettes and knife handles (Hendrickx, 2006: 728).

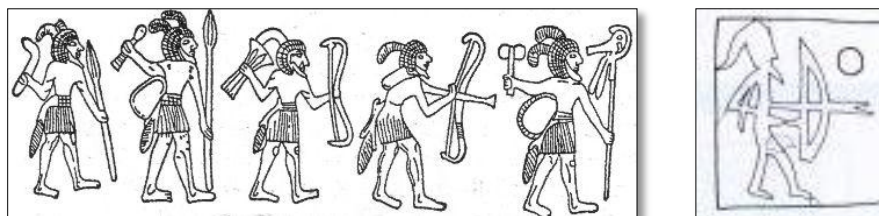
Regarding data obtained from archaeological excavation, hunting makes up only 2% of food procurement in the Predynastic, but wild mammals constitute 16% of remains at Hierakonpolis HK 29A temple site and there is a wide range of wild animal remains in elite cemetery HK6 (Hendrickx, 2006: 735). In rubbish pits near the ceremonial centre HK 29A, in use for over 500 years from Naqada IIA to the First Dynasty (Friedman, 2011: 35), remains of both aquatic species such as crocodile, hippopotamus and turtle, and gazelle and barbary sheep from the desert have been found (Hendrickx et al. 2010: 21). Large numbers of animals were butchered at this site, suggesting that feasting was important. Moreover, around a funerary complex in the elite cemetery HK6 are a series of animal burials, including elephant, wild bull, antelope, ass, barbary sheep and hippopotamus, in addition to domestic animals including 42 dogs, carbon dated to 3660-3640 BCE, the beginning of Naqada IIC (Friedman, 2011: 39). The antelope and a (young) hippopotamus showed limb injuries suggesting that they had been held in captivity prior to interment. Thus, desert hunting expeditions may have been undertaken in order to secure animals intended for this purpose.

In addition to animal burials, at elite cemetery HK6 there is a foundation deposit of ostrich eggshells, and 51 Red Sea shells as a ‘votive deposit,’ around a major tomb dated to Naqada II a/b (c. 3800-3650 BCE). The remains of at least 22 ostrich eggs were recovered from a

‘ritual precinct’ of what were originally pillared buildings. Some of these eggs had been set up on display bases (Friedman, 2005 & 2007). Wild animal burials include hippopotamus, aurochs (wild bull), hartebeest and dogs (Friedman, 2011). The hippopotamus and bull had a fenced superstructure around their graves, marking them as especially significant burials. There are also supposed amulets in the shape of wild animals, including addax, gazelle, ibex, hippopotami and bulls, in addition to falcons (Wengrow, 2006: 100; Petrie, 1920). Many of these are highly portable objects kept close to the person in life and in the grave. A number of these images are on bone combs and some figurines show hairstyles which would perhaps have needed a comb to keep them in place. They could have been worn by hunters with a similar purpose to having a ‘tail.’ A similar structure to that at Hierakonpolis has been found at Mahasna, north-west of Abydos (and therefore related to the northern region of the survey area) dated to Naqada II a/b. Remains of wild animals, were deposited around this elite structure, as at Hierakonpolis (Friedman, 2009: 84). Therefore, hunting as an elite activity is evident from settlements geographically near to the Central Eastern Desert. It is clear that there is a connection between Hierakonpolis and Mahasna, and possibly other settlements with elites, and the desert in the early late Naqada I/early Naqada II period at the time that many of the petroglyphs were being created. Given that this was perhaps a time of competing lineages, where no one family dominated a large settlement (Savage, 1997), the different kinship and elite groups may account for the varied style of the petroglyph sites. Above all, there was an intimate relationship between the Nile Valley and what might be termed the ‘Central Egyptian elite hunting area’ in this period.

The material culture of later periods also show hunting themes. The ‘Hunters palette’ has figures with one and two plumes, wearing tails from a canine (identified as *Lycaon Pictus*, Hendrickx, 2006-Figure 8.6), which can be interpreted as a feature utilised in order to take on the power of hunting dogs. In addition, they carry a pear-shaped mace and a falcon standard; clear evidence of elite status. The mace and standard date these representations to either Naqada II d or III a. We also see bow-carrying figures on labels from Tomb U-J at Abydos (Figure 8.7) and dogs on a dozen palettes or fragments (Raffaele). The importance of hunting to the elite also continues through the dynastic era, but often in controlled situations shown in tomb paintings where animals are trapped, brought into an enclosure and the deceased hunts them there, not where the hunter (the deceased) goes out deep into the desert. Moreover, in the tomb scenes we see dead and dying animals hit by missile weapons, whereas in the predynastic desert scenes (with the exception of the rare crocodile and hippopotamus

harpooning) there is only the hunt itself, not the result. This additionally supports the contention that many of the desert petroglyph hunting scenes are unlikely to be of dynastic date.



Left: Figure 8.6. Detail from the 'Hunters palette,' after Wengrow, 2006: 186, Right: Figure 8.7. U-J label after Dreyer, 1998

Hunting images are widespread in the Central Eastern Desert and this study has determined that herding is only a very minor part of the petroglyph scenes (Chapter 4, pp 35-36), especially in the Predynastic. Notably, at 67 (65%) of the 106 sites where human figures are clearly engaged in hunting there is a close relationship with boats. Therefore, there is a strong correlation between hunting images and those of boats specifically, and animal images and boats generally. In addition, the 'arms raised' figure is seen at 27 (25% of Predynastic/Mixed sites) sites-almost always associated with animal petroglyphs, and present particularly at the largest predynastic sites. At only 3 sites boat images are not in the scene with the figures, although they may be present at the site or nearby. Just as the 'arms raised' figure and animal control scenes are a minority feature on the D-Ware (9%), the 'Integrated' elements in the predynastic petroglyph scenes are as well (20%). Thus, they constitute one element within the variable burial practices and preparations for the afterlife which were being developed and practised in the Predynastic period.

8.3 Hunting as a Predominant Motif

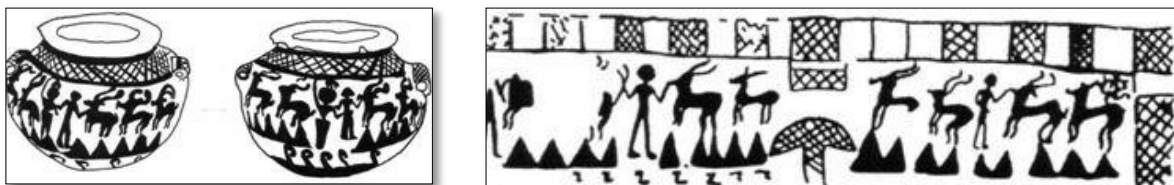
This study proposes that there is a close relationship between the predynastic rock-art and funerary practice in the Nile Valley, and this can firstly be tested by examining the Naqada I-II a C-Ware pottery from cemeteries. C-Ware pots display many hunting scenes (37 in all; Graff, 2009) often of crocodiles and/or hippopotami, with a few 'arms raised' figures and boats. As noted above (Section 2.2, p 11), hunting with dogs is also a feature of this pottery. However, in the subsequent Naqada II c/d D-Ware dogs more rarely appear on pottery, and examples of hunters with dog packs chasing down prey or possessing bows are absent.

Therefore, the question must be asked whether a connection can be made with Nile Valley funeral practice, or did the repertoire displayed by the petroglyphs, and therefore the ritual purpose of the rock-art, cease to be part of Egyptian funerary practice in the Naqada II c/d period?

Hitherto, there has been a problem connecting predynastic burial objects, notably pottery, to the rock-art in the desert dateable to the Predynastic. In particular, the boat images on those examples of D-Ware pottery which are painted constitute a formalised and restricted repertoire with considerable differences from the C-Ware and the petroglyphs. This leads to the reasonable question that “if the square-hulled and incurved sickle shaped boats were essentially funerary in nature...why are they not more common on objects (painted pottery) that actually accompanied the deceased in the afterlife?” (Huyge, 2004: 121). However, this objection can be overcome as both in the petroglyph and Nile valley contexts there are associated boats, hunting and dancing-for example, the Gebelein Linen and T100 painting (see Figures 8.3 & 8.5), and ‘arms raised’ figurines in burials.

Both the C and D-Ware ceramics combine boats with desert-based animals and examples of hunting/control. Although the images on the C-Ware are mainly of plants, riverine animals and hunting, desert fauna are additionally well represented. There are also half a dozen vessels with boats. Five of the latter have animal depictions, four of them showing desert species (Graff, 2009). In addition, the Ashmolean clay box, dated to Naqada I c/IIa, combines a ‘two frond’ boat with crocodile, hippopotamus and giraffes or antelope. On the much more formalised D-ware pottery we have only five apparent desert hunting scenes, all involving only dog(s), in addition to three showing a riverine hunt (Graff, 2009: 254, 256, 303, 346, 379, 380, 381 & 382). But there are also 36 examples of men with throw-sticks, in addition to desert animals such as the ostrich, ibex and addax. Moreover, a pot from Abydos has a male figure standing behind a row of animals shepherding them forward (Graff, 2009: 278), while in 4 cases a figure actually touches an addax and can be said to be in control of animals (Graff, 2009: 256, 258, 286 & 297-one is provenanced suggesting these similar examples do constitute a group, Figures 8.8 & 8.9). One provenanced example from Gebelein has a male figure in front of a row of antelope holding a halter on the lead animal (Graff, 2009: 362). Moreover, 145 of the D-Ware pots have depictions of desert animals, suggesting a continuation of the strong link between valley and desert in the experience of the artists

(Graff, 2009). Indeed, Nile Valley animal depictions are extraordinarily rare on this pottery type. Therefore, we can, after all, connect the D-Ware grave pottery with the desert petroglyph scenes. Additionally, only a few D-Ware fragments have been found in settlements. All of the provenanced complete vessels come from burials (Graff, 2009). They show a restricted, extremely formalised repertoire and were probably made in a small number of locations. In this period only one (Sickle) boat type was considered appropriate for illustration on the pots, in contrast to the much more diverse representation on C-Ware and among the petroglyphs. However, the importance of elite hunting expressed in the images on the pottery and by the petroglyphs remained.



Left & Right: Figures 8.8 & 8.9. Human figures on D-Ware ‘controlling’ wild desert animals, Graff, 2009: 256 & 258

8.4 ‘Dancing’

The presence of ‘dancing’ figures with their arms raised and incurved above the head is a notable feature in the desert. It has been suggested (Hendrickx, 2011a) that far from having a key and unique role associated with hunting, the figures are part of a victory celebration. This is refuted here, and it will be suggested that the figures are indeed occupied in a dance. If we accept that a victory scene is present on the C-Ware, while it clearly never appears in the rock-art and on the D-Ware pottery, a large temporal gap for the victory theme must also be accepted and the rock-art will stand with a weak connection to Nile Valley culture. However, by demonstrating that the gesture does represent ‘dancing,’ it will be possible to link the C-Ware, the petroglyphs, and the D-Ware together with the dancing theme. The purpose of this dance, its extent in the petroglyph scenes, and the relationship between the dancers in the rock-art and on Nile Valley media, are also examined here. Although apart from the Gebelein Linen and Tomb 100 painting, we lack the public ritual context for funerary activities in Naqada I and II, it is possible to identify dance as a component of these activities.

8.4.1 Dancing ‘Arms Raised’ Figures

It has been suggested that the ‘arms raised’ figures on the C-Ware, and by extension on the D-Ware and in the rock-art, represent the celebration of victory attended by prisoners. That the raised arms gesture involves dancing has been convincingly argued by Garfinkel (2001, 2003), focusing on the lack of aggressive gestures, and no smiting scenes or bound prisoners in the C-Ware examples. Hendrickx notes that “the military aspect is not rendered through actual scenes of violence, but through captives with their arms bound at their backs and in some cases ‘attached’ to larger figures, sometimes holding maces, considered to be the victors, and that “Raised arms are another expression of victory ” (Hendrickx, 2011a: 76). Since this study fundamentally proposes that the figures in the rock-art are indeed ‘dancing,’ and that this activity links the rock-art and the pottery, the supposed military nature of the pottery scenes must be dealt with.

The difficulty of interpreting the C-Ware scenes is demonstrated by a pot from Tomb U-239 at Abydos (Figure 8.10). This does have a large figure (perhaps the same one shown three times) carrying an object which might be a mace. However, the object is carried in a non-threatening way in relation to the smaller figures. Nor is there any sign that the smaller figures are bound. On the contrary, where the figures are connected, they hold each other by the hand. In the bottom there may even be a woman holding a small child or baby. The lack of imprisoning bindings is also indicated on the Brussels pot (Figures 8.11 & 8.12), where the lines from the shoulders of the smaller figures more likely represent arms poorly applied to the surface, rather than bindings. This is supported by another vessel from Abydos, in Tomb U-145 (Figure 8.13) where what appear to be arms are crudely depicted in both the top and middle register figures. Here the people depicted appear to be standing arm-in-arm, rather than being bound. Even the figures in the bottom register controlling/harpooning hippopotami have limbs which are similarly crudely depicted. Therefore, the ‘arms raised’ figures and their companions here represent a communal dance activity, rather than having any military function. Moreover, there are no examples of military activity or prisoners on the D-Ware. On these vessels a large female ‘arms raised’ figure is sometimes associated with male figures carrying throw-sticks. There are also 12 examples on the D-Ware pottery of figures holding hands, or resting their hand or arm on another figure’s arm or shoulder (Graff, 2009). None of these figures are bound in any way. Non-pottery evidence with associated images, such as the Gebelein Linen, also shows communal dancing, including ‘arms raised’ figures

and a (damaged) row of dancers holding hands, with no evidence of violent dominance. This lack of a military theme is echoed in the rock-art where it is completely absent.



Far Left: Figure 8.10. Tomb U-239, Garfinkel, 2001:244, Centre Left/Right: Figures 8.11 & 8.12. Brussels C-Ware pot, author's photos, Far Right: Figure 8.13. Tomb U-145 pot, Graff: 2009: 247

8.4.2 The Role of Dancing

Dance is a cross-cultural activity which has social and religious functions in traditional communities. There are many depictions of what may be dancing from the Neolithic Near East and Balkans (Garfinkel, 2003: 11). Those outside Egypt rarely show the dancers together with animals, and never with the large numbers of quadrupeds seen in the Central Eastern Desert petroglyphs. 'Dancers' on the D-Ware and in the rock-art also appear either singly or in very small groups (as at Kanais and SAL-35) as opposed to large groups, in some cases circles, of dancers outside Egypt. Interpretation of Mesopotamian dancing scenes suggests that they represent the earliest roots of the later, 3rd millennium, temple cult dramas (Garfinkel, 2003: 40). However, the 'dancing' portrayed on the Gebelein Linen, C and D-Ware, and desert rock-art with the classic 'arms raised' figure pose does not continue into the Egyptian late predynastic or the dynastic era.

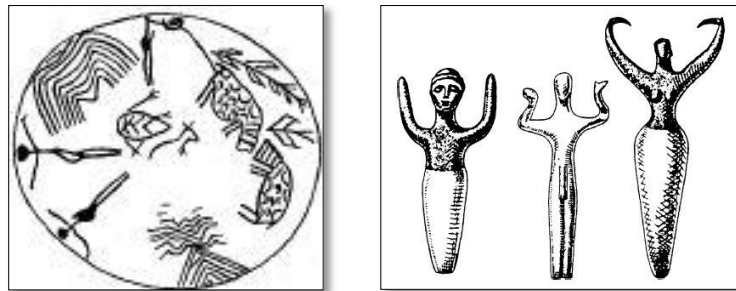
Dance has power and communicates in a multisensory, emotional, and symbolic manner. Dance is a vehicle that incorporates inchoate ideas in visible human form. It is a multisensory activity, which frames and prolongs communication, and "the sight of performers moving in time and space, the sounds of physical movement, the smell of physical exertion, the feeling of kinaesthetic activity or empathy, the touch of body to body or performing area, and the proxemic sense-has the unique potential of going beyond many other audio-visual media of persuasion" (Hanna, 1987 in Garfinkel, 2003: 59). Once the dance is over the participant

feels restored and refreshed with inner tensions released (Moore, 1979 in Garfinkel, 2003: 59). The early Naqada Egyptians appear to have connected the power of dance with control over the wild, represented by desert fauna as well as the crocodile and the hippopotamus, and with river vessels in the assemblages of necessary equipment for the elite deceased.

It is argued here that ‘dancing’ is an important, although not overwhelming, aspect of the rock-art during a restricted period of time. Only a minority of the scenes dated to the Predynastic have ‘arms raised’ figures. However, significantly, the figures are present at or near many of the large-scale ‘Integrated’ petroglyph scenes. Boats are rare on the C-Ware pots, most of which (where provenanced) have a funerary context, and prolific on D-Ware, virtually all of which, apart from a few sherds, come from graves. Moreover, central figures in boats are not a major feature of either, although on D-Ware the large female ‘arms raised’ figure and the smaller male figures that often carry throw-sticks sometimes appear to stand on or above deck. Between the petroglyphs and D-Ware depictions there is also the difference that the ‘arms raised’ figures in the desert seem to be overwhelmingly male, as are the few on C-Ware, while those on the Gebelein Linen (although this is damaged and unclear in places) and the D-Ware are overwhelmingly female. This may be due to artefact survival, or to a difference in belief regarding the role of the figures in funerary practice in different locations. Or it may demonstrate a definitive masculine/feminine contrast between desert and valley, perhaps based on hunting being a male activity.

‘Dancing’ does appear as an important part of predynastic funerary practice. There are ‘dancing’ figures on C-Ware in graves. These include three scenes on provenanced pots from cemetery U at Abydos including one ‘arms raised’ figure (Graff, 2009: 245 & 247) and two un-provenanced pots with ‘arms raised’ figures from University College London and Brussels, (Graff, 2009: 242 & 243). However, these are not associated with boats. There is also a Naqada II c C-Ware bowl from Mahasna showing two dancers with outstretched arms associated with hippopotamus harpooning (Figure 8.14). Different kinds of dancing are thus indicated in late Naqada I through II c apart from the formalised D-Ware. It must be noted that the ‘arms raised’ figure is only found on 29 D-ware vessels and sherds out of a corpus of 469, 11 of them provenanced (Graff, 2009). Moreover, on the D-Ware the large ‘arms raised’ figures have a variety of arm positions. This is also evident in (provenanced) figurines over a long period (Figure 8.15) starting from Naqada I and perhaps earlier (Ucko, 1965). Male figurines are shown with legs and female ones without, suggesting that the vast majority in

the Central Eastern Desert are indeed male. Interestingly, this is a pattern carried into many of the figures on D-Ware.



Left: Figure 8.14. C-Ware bowl from Mahasna, Naqada II c context, with dancers and hippopotamus hunt scene, Graff, 2009: 226, Right: Figure 8.15. Clay figurines, Naqada I/II, after Kantor, 1944, fig. 7.

There is not an exact correspondence in the presence of the ‘arms raised’ figures and their association with boats between the Nile Valley and the Central Eastern Desert. On Naqada I C-Ware pottery none of the few ‘arms raised’ figures are associated with, let alone stand in, a boat. The Ashmolean clay box with the ‘two fronds’ boat came from Mahasna, north-west of Abydos. At Hierakonpolis, which is on the West Bank nearly opposite the entrance to Wadi Abbad/ Kanais/ Baramiya, there are ‘frond’ boats, but no ‘arms raised’ figures among the petroglyphs. Nor have any D-Ware pots with such figures been found there. The Naqada II c T100 painting has sickle-shaped ‘Type I’ vessels, animal control and dancers, albeit not with their arms raised and incurved above the head. As previously noted, Gebelein is located opposite the north-central part of the survey area and is the source of the linen found in an elite tomb which has hippopotamus hunting, boats, and a row of ‘arms raised’ figures among other dancers. These suggest a communal dance as part of a funerary scene (Figure 8.16). Most of the D-Ware pots with the mainly female figures come from archaeological sites on the West Bank, south-east of, but near to, the Wadi Hammamat-such as Naqada, or to the north-east in the case of El Amrah, Semainah and Abydos (Table 1). In addition, there are five ‘arms raised’ figures at El Kab, albeit only associated with one quadruped (Figure 8.17) and a related dancing figure with the hands turned outwards associated with a hunting scene with boats below much like related scenes in the Eastern Desert (Figure 8.18).

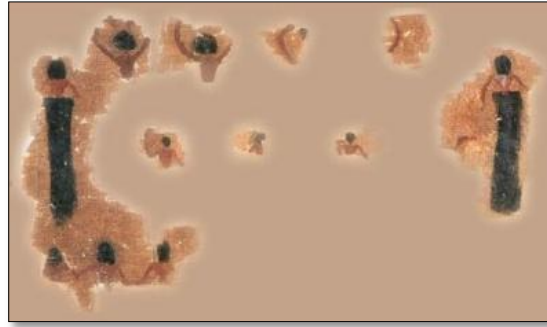


Figure 8.16. Detail of 'arms raised' dancers from the Gebelein Linen, (Museo Egizio Torino, 1994: 22)



Left: Figure 8.17. El Kab 'arms raised' figures in classic pose, photo courtesy D. Huyge, Right: Figure 8.18. El Kab, variant of 'arms raised' figure (right) with animals, Huyge, 1999: 53

In summary, the role of dancing in early Egyptian society is intimately connected to funerary practice, as evidenced by pottery, figurines, the T100 painting and the Gebelein Linen. Nearly all of these artefacts date from the Naqada I c through the Naqada II c/d period. On the Gebelein Linen we see a formalised group dance which includes 'arms raised' figures in the classic incurved pose in addition to dancers holding hands (seen also on D-Ware), and others with one arm raised. In the rock-art most of the dancing figures are singletons, but there is one example of two in a boat and a group of three (Wadi Salam) and six dancers in or associated with a boat at Kanais. In many cases the desert dancing figures are no better delineated than non-dancing ones. It is the pose which appears to have been important to the petroglyph creators. The figures stand statically, often among the animals they 'control.' Therefore, it is this act of power which is the most important point portrayed by the petroglyph scenes involving these dancers. This is in contrast to pharaonic scenes where many different poses for both women are seen, and the hieroglyph for "dance" is a dancer standing on one leg with the other one bent at the knee (Meyer-Dietrich, 2009: 1). The most detailed 'Integrated' scenes, such as BAR-9 and 10, MIY-1, MIN-13, WAS-10, WAS-16 and QAS-3 all have at least one 'arms raised' figure. The question remains, however, whether

these depictions in the rock-art are representations of actual funeral rituals which took place when an elite deceased was buried and/or dancing took place in front of the rock-art tableaux. Only one collective dance is seen in the Nile Valley, on the Gebelein Linen, but this portrayal combined with boats and a hippopotamus hunt, in addition to at least one desert animal, together with the presence of a few groups of dancers in the petroglyphs, indicates communal activity.

8.5 Explaining the ‘Impossible Combinations’

If the presence of hunting scenes in the Central Eastern Desert is readily explicable, it is the realistically ‘impossible combination’ of boats, hunting and figures in an integrated scene dated to the Predynastic, and not seen later, which must be explained. In the rock-art these scenes contrast with examples dated to the pharaonic period where boats are isolated or near to hunting or animal scenes, rather than integrated within them. The presence of boats among animals stands out, especially since we rarely see hunting from boats, but rather boats in the middle of desert hunting scenes. The presence of the human figures, including especially those with their arms raised and incurved, is also notable. These are unlikely to show actual game drives or people standing in the middle of a wild herd. Anyone attempting this would either be trampled, or more likely see the frightened animals disappearing into the distance in flight. On the contrary, it is the accumulation of animals together which is significant. Where hunting is shown in the petroglyph scenes it involves either hunters with bows or chasing down prey with dogs. It is argued here that this gathering together of otherwise unassociable elements can only be as a result of human control through the influence of the dancers. At Umm Salam 35 we see ‘arms raised’ figures among a varied group of animals. A large figure controls a bovid and together with these figures influences the animal collection. These face different ways and thus cannot constitute a game drive, but are brought here by the human figures. At BAR-9 an ‘arms raised’ figure and two figures controlling respectively a bovid and a crocodile ‘glue’ the scene together. In these scenes a mix of animals, desert and riverine, large and small, climber and grazer, are brought together by this means. This kind of depiction contrasts with the separate hunting scenes where a hunter and dog(s) pursue a small number of antelope or ibex. These are examples of realistic hunting, with neither the contrived presence of boats, nor the mixture of different species included.

The integration of boats with animals and humans hunting or in control of animals demonstrates the ability of people to control the natural world through gesture and dance as

well as by lasso and bow. The presence of dragged boats, always with only a small number of draggers, adds to the theme of ‘control.’ On the Gebelein Linen, found in an elite burial, we see the dance/boat/hunt combination. This time, the presence of the ‘arms raised’ figures in a communal dance may suggest an actual ceremony for the deceased. The linen was found in an elite grave, as was the C and D-Ware. Thus, in late Naqada I/early Naqada II we have the dance in a Nile Valley burial context together with figurines and hunting implements, including clay models of these in some graves at Hierakonpolis and Adaima (Figures 8.19-21). We also have the boats/hunting/dancing combination in the rock-art. This is distributed all over the Central Eastern Desert, although with the ‘Integrated’ scenes much more prevalent in the southern area. The rarity of petroglyphs showing the sickle boat type on the D-Ware pottery, and the presence of most of the petroglyph examples of this type in the north of the survey area near where most D-ware is deposited in Nile Valley graves (Graff, 2011: 49), suggests either that hunting forays decreased in frequency or it was not considered so necessary to record them on the Naqada II c/d period.



Left: Figure 8.19. Naqada I clay hunting implements from Adaima, Pieri & Friedman, 2001, Centre: Figure 8.20 & Right: Figure 8.21. Flint arrowheads and animal figurines, Hierakonpolis, Friedman, 2010

Many of the boats associated with the ‘arms raised’ figure petroglyphs are probably dateable to late Naqada I/early Naqada II, and the D-Ware with its related scenes dates to the later Naqada II c/d period. But the ‘arms raised’ figure does not occur after this period, and there are only a few petroglyphs dateable to Naqada III in the desert east of the Nile. This suggests that in the late Naqada I/Naqada II period, hunting in the desert was an elite activity and an element that needed to be continued into burials. There are only 40 ‘arms raised’ figures on C and D-Ware (4 examples on C-Ware, 36 on D-Ware, Graff, 2009: 151-2). Boats (251) and ‘water’ (308) are the most common motifs on the D-Ware (Graff, 2009: 171 & 181). Thus, it was not thought necessary to have the ‘arms raised’ figure present in more than a minority of graves in Naqada II, while boats (and especially desert animals) appear more significant and required. In Naqada I there is a very small number of figures on C-Ware, although there are also clay figurines-again in a minority of graves (Ucko, 1968), and examples of boats; 5 on

C-Ware (Graff, 2009: 171) and some boat models and pot-marks. Here we see the beginning of the theme. The Gebelein Linen is either dated to late Naqada I or early Naqada II and has a group of the ‘arms raised’ figures, boats and hunting, while the Naqada II c T100 painting has dancers, boats and hunting (Figure 8.22). In none of all of these examples are vessels indicated as travelling on water. The T100 scenes therefore represent a culmination of the development of these features in the rock-art.



Figure 8.22. Dance scene from the Gebelein Linen, Raffaele

The Naqada II D-Ware appears formalised, while in order to view the whole unconnected scene it is necessary to turn the pot. On the other hand, in the C-Ware there are far more open bowls than closed pots and many scenes are on the inside (Graff, 2009). More can be viewed as complete compositions and seem to have greater vitality, including hunting with dogs and hippo and crocodile hunting. Some obviously inanimate bowls seem to come alive where hippopotami and crocodiles walk round the rim in relief (Figure 8.23) or the bowl itself can walk (Figure 24). There is even a bowl where a dog grasps hold of an ibex in the form of a comb (Figure 8.25) and a pot with a face (Figure 8.26). These objects are “images in motion,” (Wengrow & Baines, 2004:1087) and a related concept may also be seen in the petroglyphs, where boats allied with people appear to be involved in chasing down prey as images charged with power. It is seen additionally in the later ‘Bull’ and ‘Battlefield Palettes,’ (Naqada III) where standards, as if they are alive, hold prisoners in hands reaching from the staff of each emblem (Figures 8.27 & 8.28).



Far left: Figure 8.23. C-Ware bowl with hippos & crocodiles in relief, British Museum, author's photo, Left: Figure 8.24. Bowl with feet in Metropolitan Museum, New York, museum website, Right: Figure 8.25. C-Ware bowl with dog attacking 'comb ibex,' Graff, 2009: 233, Far right: Figure 8.26. Cylindrical pot with face, Royal Museum of Arts & History, Brussels, author's photo



Left: Figure 8.27. Bull Palette, Louvre Museum, Paris, author's photo, Right: Figure 8.28. Battlefield Palette (detail), Ashmolean Museum, Oxford, author's photo

It is worth noting that for dynastic Egyptians the picture was the object, as shown, for example, in tomb offering scenes (Leprohon, 2001: 569). In these paintings the depiction of the required offerings could maintain their provision through eternity, even if no actual food was brought to the tomb. The 'artists' "did not represent a certain moment, but what they considered for all eternity" (Ignatov, 2004: 4). This principle can be usefully applied to the petroglyphs as an illustration and analogy, rather than as a direct explanation. It constitutes the same quality in the power of the grave pottery to equip the deceased to participate in the Afterlife. Within this framework a hyper-image is created where the actor perceives the real object of a rock carving or artefact (Helvenston & Hodgson, 2010). At the same time, intense emotion, ritual or ceremony leads to seeing both the hyper-image and the real image at the same time. Thus, the integration of human death and animal death, of movement and restraint, of life in the desert and valley, and on land and water is accomplished within the 'impossible combinations' we see in the petroglyph scenes. In the early predynastic period, the idea of this afterlife for the elite included hunting as an important, indeed essential, activity. Contrary to the often assumed desert/sown contrast in which the area outside the Nile Valley was seen as somewhere to avoid if at all possible, there was an integral link between valley and desert shown by this activity (Darnell, 2007: 48).

8.6 Utilitarian Reasons for the Petroglyphs

In this section I propose that in addition to the funerary purpose argued in the previous section, the generation of petroglyphs in the desert can also be partly related to utilitarian activities, especially in the dynastic period. It will become apparent that there is a clear difference between the predynastic and later periods in that utilitarian motives for journeys into the desert are seen to be more significant over time.

8.6.1 The Desert as a Resource Over Time

The desert was a resource for game and minerals, especially stone and gold, from an early period (Wengrow, 2006: 80). Badarian culture (4400-3900 BCE) graves contain shells and carnelian from the Red Sea, and mudstone palettes; although the latter probably had a primarily ritual purpose. They were sourced in the Wadi Hammamat quarries when the early Egyptians could easily have made palettes from stone easier to hand (Stevenson, 2006: 151). These, and garnets, are present in graves from the Badarian period (Shaw, 2001: 11). Sourcing stone from the Hammamat quarries appears to have been a steady activity, particularly in the Middle Kingdom period, 13 expeditions being sent at intervals of approximately 5 years (Shaw, 2001: 244). Thus, there was no continuous occupation of the mineral resource areas. This is in contrast to the Greco-Roman period when a network of windrow-marked roads, cisterns and way-stations was constructed in to enable large quantities of stone to be transported from the imperial quarries (Sidebotham et al, 2008).

There is also evidence of very small-scale gold mining from the predynastic period, although evidence of early sites may have been removed by later extensive pharaonic working (Klemm et al, 2002: 216). Gold mining increased in intensity during the pharaonic era. In the New Kingdom Egypt was famed across the Near East for gold being “as abundant as dirt,” demonstrated in the Amarna Letters (Moran, 1992: 44). The use referred to here was for gift exchange between the ‘Great Kings’ of the Near East, although it must be remembered that gold was also seen as a divine metal-the ‘flesh of the gods’ (Shaw & Nicholson, 1996: 114). In addition, temples, such as that of Seti I at Abydos, could be granted mineral resources from the Eastern Desert, recorded at Kanais (Kemp, 1989: 191). However, until the New Kingdom, most gold probably came from Nubia and gold-working in the Egyptian Eastern Desert was small in scale (Klemm, Klemm & Murr, 2002: 216). This may account for the relatively small number of pharaonic sites and motifs in the survey area compared to early

ones given the much greater length of time that pharaonic images could have been created. There is evidence of prospecting and a considerable expansion of gold-working in the New Kingdom (Klemm, Klemm & Murr, 2002: 217). Two-thirds of the pharaonic boat images in the Central Eastern Desert have a central mast and/or triangular steering oar (markers of a New Kingdom date), showing the level of activity in the desert during this period compared to the Old and Middle Kingdom. Petroglyph sites from the pharaonic and Greco-Roman wide eras do congregate near vegetation and water resources on routes to the mines and quarries.

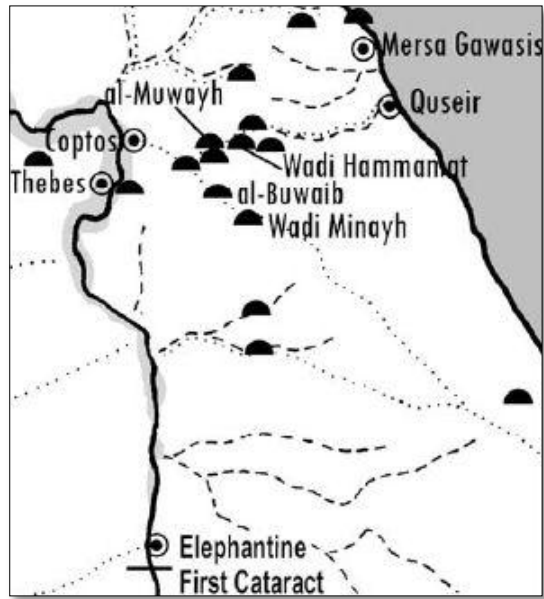
While there is a great deal of evidence for economic activity regarding the collection and extraction of minerals, hunting for daily food was a minor activity and hunting expeditions are here explained as connected to the elite in both the predynastic and dynastic periods. Therefore, hunting had mainly a ritual rather than a food-gathering character. In addition, nomadic pastoralism is not a significant feature of the Central Eastern Desert petroglyphs. However, we should also remember that there was not necessarily always a division between economic and ritual use of resources from the Eastern Desert in both the predynastic and dynastic periods since ostrich eggs, garnet and sea shells are found in early graves. Moreover, the stone for the elite sarcophagus was believed to have reviving properties for what was essentially a rejuvenating machine, referred to as the 'Master of Life' (Lapp & Niwinski, 2001: 279).

8.6.2 The Pharaonic and Greco-Roman Images

Pharaonic period scenes include boats and aside from hieroglyphic inscriptions, which are not part of this study, they are present in dynastic Egyptian iconography in some numbers in the Nile Valley and, to a lesser extent, in the desert petroglyphs far from the river. How can we account for the pharaonic boats' presence in the rock-art of the Central Eastern Desert? Owing to the presence of corroborating textual material, the pharaonic and later examples are easier to understand than the early examples. The pharaonic boats could be linked to expeditions either to Punt to access all the produce of 'god's land' and to import war elephants, or to people on mining and quarrying expeditions, in particular given a number of hieroglyphic inscriptions referring to gold or the title of ship's captain (Rothe, 2008). For example, the concentration of dynastic boat images in Wadi Abu Mu Awad, with considerable representation in Hammamat and Baramiya, can be seen as marking routes to the gold mines. Additionally, there are a few pharaonic boat images in the Hammamat

quarries (outside the Eastern Desert rock-art surveys' area). There is also one behind a mining hut in the Wadi Bakariya gold mining area (see Figures 7.39 & 7.40, Chapter Seven, p 39). The naval teams in charge of mineral transportation could have carved the boats which transported the resources from their entry point on the Nile, perhaps at Coptos, or the images may be an emblem of the work teams.

The number of inscriptions consisting only of a name followed by the man's occupation suggests a whiling away of time and desire to mark presence by literate individuals or their scribal colleagues, just as people carve graffiti in modern times. In addition, in some places, especially where there are depictions of Min-a god particularly linked with the desert, boat representations may be part of a shrine. Min 'shrines' (Map 8.1) are particularly located in the north and north-central Wadis Hammamat and Mineh and are associated with New Kingdom inscriptions in shaded situations (Espinel, in press: 11). Travellers could rest here and give thanks to the god for safe passage in what by the pharaonic era had become an area many Egyptians feared and preferred to avoid. While Min was not a god particularly associated with boats, desert activities led to Nile boat teams having to venture into unfamiliar territory, and a number of inscriptions give thanks to the god for his protection in what was perceived as his territory. For instance, a Twelfth Dynasty inscription by one official in the Wadi Hammamat quarries states, "I came to these highlands in safety by the power of Min the Lord of the Highlands" (Weigall, 1909: 45). Favourable weather was ascribed to the god during the expedition ordered by Montuhotep IV, "Rain was made and the form of this god appeared in it. His glory was shown to men" (Weigall, 1909: 42). It was this rain event which not only supplied a temporary lake but uncovered an old well. The inscription also records that allegedly even the local desert dwellers did not know of its location. Min's power was evident and appeals to him were demonstrated to be efficacious. Travellers even in large and well prepared expeditions had good reason to be thankful as these missions were hazardous. Valley dwellers unused to life in the desert were vulnerable. A large expedition of Ramses IV with 9000 participants lost 10% of its personnel (Weigall, 1909: 47). Falcons are also found associated with pharaonic boats, especially in Abu Mu Awad which is noted for its number of late boat images and route to the gold mines, including the depiction of two sacred barques at MUA-12 (Figure 8.29). These barques usually contained an image of the god which was carried in procession.



Map 8.1. Min 'shrines' in the Eastern Desert, after Espinel, in press



Figure 8.29. 'Sacred barques,' MUA-12, author's photo

In the Roman period, economic activity in the Eastern Desert, particularly Mons Claudianus and Porphyrates, increased. However, visual depictions of any activities are rare. There is one depiction of an elephant with a Greek inscription at Kanais describing a hunt further south (Weigall, 1909: 137). But there is no evidence of trains of elephants which were imported via Berenike (Casson, 1993). Nor, apart from Greek and Latin inscriptions at shaded shelters such as MIN-14 (RME-24b), is there much graphic evidence of Roman activity in the Central Eastern Desert. In the Roman period there was a chain of forts (praesidia) wells (hydreumata) and cisterns (lacci) in the Eastern Desert, marked (but not paved) roads and a series of watch towers along the Wadi Hammamat. Travellers engaged in the Indian trade, and trading with territories to the south, could rest at the forts. Boat depictions are not apparent in the Roman period near to the forts and quarries. Ostraca and a few inscriptions refer to secular economic activities, suggesting that by this period boat images were not needed for the purposes they were used for previously. The difference seems to be that in the pharaonic period there are dedications to kings and viceroys, other inscriptions, and boats inscribed by travellers on royal expeditions many of which are probably referring to the patron. In contrast, during the

Roman period mines and quarries could be leased to private individuals rather than the state, and therefore did not require dedicatory markings (Tratsaert, 2010: pers. comm.)

8.7 Conclusion

However powerful and pervasive boat images are in Egyptian history, it is not possible to trace a direct line of a connection between the predynastic portrayals on the rock and those much later in pharaonic tombs. Nor is it possible to trace the origins of pharaonic festivals in predynastic scenes such as that in Tomb 100. The names of the gods are only known from the dynastic era, despite the presence of falcons, ‘proto-Min’ figures and his so-called ‘thunderbolt,’ and an ‘early Seth’ on pottery and rock surfaces (Darnell, 2002: 10, 19). It is possible that many of the gods’ cults and their attachment to specific shrines were actually kingly foundations to consolidate royal power in the early dynastic period, especially during the First Dynasty. There is, for example, no archaeological evidence to connect the goddess Neith with Sais in the predynastic era, despite the presence of crossed ‘arrows,’ allegedly indicating the goddess, on D-Ware boat standards (P. Wilson, pers. comm.). Therefore, it will be a vain search for parallels to dynastic barques and journeys in the early petroglyph scenes.

This chapter has argued that we can, after all, overcome objections to seeing the predynastic petroglyphs as related to funerary beliefs. The presence of the ‘realistically impossible combinations’ and associations in both Nile Valley burial and desert petroglyph contexts provides a firm link between the two locations and spheres of human activity. In the early predynastic it is apparent that a division between a valley home and desert alien land did not exist, at least in elite behaviour and outlook. The spread of the combinations of animals, hunters and boats, and the ‘frond’ boats and ‘arms raised’ figures over the Central Eastern Desert suggests that this was true for the whole of the core of the Naqada culture from Abydos to Gebel Silsila. Indeed, the distribution of the combinations in an area bound by Wadi Hammamat/Atwani in the north of the EDS/RATS survey area to Wadi Shait opposite Kom Ombo matches, eastwards, the Upper Egyptian Naqada cultural zone. In this culture grave goods are commonly seen as ‘provisioning’ the deceased for the afterlife. But the activities shown in the desert images combined with human and animal figurines, arrowheads and representations of boats and ‘dance’ in graves, also suggests that this combination allows ‘participation’ in this afterlife and power over all the wild forces in order to enable this. Associated motifs are found in the Nile Valley adjacent to both the north and south of the

Central Eastern Desert survey area. The importance given to feasting and the burial of animals around elite graves at Hierakonpolis and Mahasna from late Naqada I through Naqada II suggests that the hunters portrayed in the rock-art are from these and other prominent population centres. Further support is given by the stylistic similarity between boat petroglyphs at Hierakonpolis and Kanais in particular. The ubiquitous large figures standing in boats may command this activity, or represent the deceased and/or ancestors, since in a number of instances there are several of these figures.

The early petroglyphs and their role should be viewed in their ritual context and as actors in funerary activity in the Predynastic period. We find the thematic combination in the petroglyphs and on burial objects over a wide area of Upper Egypt. Through their mechanical resonance the ‘dancing’ figures give power to the ritual shown in particular on the Gebelein Linen and Tomb 100 painting. In addition, the finished image is present on the rock surface for a very long time, indeed forever, in human and supernatural perception unless deliberately erased, and this is not a feature of the Central Eastern Desert rock-art. It therefore has an eternal character. The ‘dancing’ figures link hunting and boats, valley and desert in a seamless bridge between life during life and life into the after-life. The rarity of the portrayal of dogs on the D-Ware is particular to that type of pottery, as they continue to be represented on palettes and knife handles.

Control of the wild powers is in evidence in the rock-art, on the Gebelein Linen and T100 painting, on the C and D-Ware pottery, and in the wild animals taken and held in captivity until buried around elite graves in the predynastic period. Combined with this is the collection of ostrich eggs, garnet, carnelian, malachite and mudstone palettes-the latter only sourced from Wadi Hammamat (Stevenson, 2006: 151). Deposited as foundation deposits and grave goods, these give the Central Eastern Desert a profound ritual character and depth where the ‘desert’ was brought into, and connected with, the ‘valley.’ Hunting with dogs and the bow continued, even if this had not been much portrayed on the intervening Naqada II c/d D-Ware, as an elite activity into the dynastic era. But the ‘arms raised’ motif dropped out of the repertoire altogether. Presumably this particular gesture was deemed to be unnecessary, or that in the early dynastic period this ritual hunting activity was reserved only for the ruler, who was deemed in his unique person to have the power over the wild. Additionally, although the control of resources and trade routes are arguably factors in the development of a unified kingdom, there is almost no evidence of rock-art from Naqada III in the survey area

analysed in this thesis. Therefore, utilitarian reasons for the creation of predynastic petroglyphs in the Central Eastern Desert are not a major factor.

The pharaonic images tell a different story. Together with hieroglyphic inscriptions, the boats, 'Min shrines,' and falcons trace the journeys of dynastic Egyptians to the quarries and the Red Sea, but mainly to the gold mines of the Central Eastern Desert and south of Wadi Baramiya. Given that the navy was in charge of desert transportation, the pharaonic and Greco-Roman boat petroglyphs may represent the teams responsible for moving stone and other minerals. Other pharaonic images are boat shrines, or associated with the temporary shrines carved mainly in the northern section of the Central Eastern Desert. While pharaonic expeditions into the desert were often intended to collect ritually powerful material, such as stone for a sarcophagus or for statues of kings and gods, in the Roman era trade private mining and trade motivated travel and therefore led to a lack of rock-art in that period. At some later point the desert was a conduit, and perhaps a base, for horse and camel riders. Uniquely among the petroglyphs these are shown engaging in scenes of conflict. At least some of these images may be assigned to the Blemmyes referred to by Roman writers, or to the pre-Islamic Arab period. If there was warfare in the survey area at other times, there is no record or representation of it in the desert. During this period it is likely that animals portrayed represent trade and/or tribute and the boats perhaps the vessels which transported them to the Nile Valley, and later to the zoo and arena in provincial centres and Rome.

9 Conclusion

9.1 Introduction

In this thesis I have outlined the distribution of the petroglyph images in the Egyptian Central Eastern Desert, and have also proposed a dating scheme and an interpretative framework from the corpus of 246 sites. This has been done in the context of ancient Egypt's relationship with the Eastern Desert in the predynastic, pharaonic and Greco-Roman periods. In identifying the distribution of the rock-art, dating much of it and establishing a relationship between the petroglyphs and the Naqada and dynastic cultures, a foundation has been provided for further work on the links between valley and (semi) desert throughout Egyptian history. This will hopefully assist in bringing the study of the petroglyphs of that region further into the mainstream of Egyptological and rock-art study. Thus, the challenge laid down in the Introduction to this study originally issued by Toby Wilkinson will have been met successfully.

I summarise here the main findings regarding the animal, human and boat petroglyphs. Firstly, in this summary I cover the rock-art's distribution and the effect of the geography of the survey area in order to identify routes through the desert, and to suggest why the rock-art is located where it is. The rock-art has been dated within the context of the Nile Valley's history to assist in determining the different purposes of predynastic and pharaonic period travellers through the desert. I therefore next review the dating results successively for the southern, central and northern regions. Following this, conclusions are presented. regarding the gathering of images, unrelated in real life, termed 'impossible combinations' in this study, which are at the heart of the thesis. Above all, the presence of 'desert boats'- representations of vessels remarkably located neither near the River Nile nor the Red Sea has been examined in detail in this thesis. As surprising is the relationship between these vessels, in scenes almost invariably containing one or more large figures in a boat, a mixture of climbing and grazing animals, and people (often hunters, but also the enigmatic 'arms raised' figures). Following this, I comment on whether the creation of the petroglyphs can have been

a frequent activity in the Central Eastern Desert. Finally, I put forward some ideas for future research.

9.2 Distribution of the Rock-Art

It is evident that the Central Eastern Desert petroglyphs are concentrated in certain parts of the wadi system. They cluster not only in fifteen wadis between and around Wadis Hammamat and Kanais/Baramiya, but also-especially in the predynastic period, in well vegetated and shaded locations within this part of the wadi system. Elsewhere, often the rock is too friable, or the terrain too dry or too uncomfortable underfoot; although in the predynastic era some obviously suitable surfaces for petroglyphs were left untouched. Travellers would also have been keen to access wells as quickly as possible, most of which are beyond the sandstone ridge three to four days' walk from the Nile Valley. The concentration of petroglyphs at Bir Kanais, much nearer to the valley, is therefore likely to be related to this water resource. The main entry points at Wadi Abbad (leading into Kanais/Baramiya) and Hammamat (leading to Wadis Qash, Abu Wasil and Mineh) are also the easiest under foot compared to potential alternatives routes from the Nile Valley such as from Luxor (ancient Thebes/Wasat). In addition, the lack of major predynastic settlement sites between Adaima and Gebelein, opposite the central zone of the survey area, probably also accounts for the paucity of early rock-art there. The location of many sites, in areas in which considerable vegetation can still be found today after millennia of aridification, indicates that they are concentrated in places where game would have gathered and been vulnerable to the hunters seen in so many rock-art scenes.

The vast majority of sites are at low level, being simply the most convenient boulder or wadi wall surface to hand, while the vast majority of these 'Low' sites are at or near eye level. In addition, in the southern wadis there is a strong tendency for predynastic sites to face 'North.' Some sites from this period appear to point the way to side wadis and other hunting grounds, although these are invariably associated with boats and have a ritual character. In addition, although there are over 4000 images, the sites depict mostly only small groups of people. They give the impression of a few creators each responsible for their own site. With the exception of the half dozen sites with predynastic hunters shown with a bow, 'tail' and one hand on hip, and the few sites (KAN-1 & 2, BAR-4 & 9, WAS-10 & 26) with clear signs of the same hand stylistically, it is difficult to chart the routes of travellers through the Central Eastern Desert, and sometimes into the Kom Ombo Drainage Basin.

9.3 Dating the Rock-Art

The lack of opportunity to carry out scientific dating of the desert petroglyphs has previously severely limited attempts to create a chronology of the images. In my study I have used comparative styles of motifs in the rock-art and the Nile Valley to date 73% of the 246 sites. The method has a long pedigree, but this is the first time that it has been employed in attempting to date a corpus encompassing the whole of the Central Eastern Desert systematically.

9.3.1 Dating: The Southern Region

An analysis of the distribution of the images has established that the southern wadis have a considerable proportion of the predynastic petroglyphs. A 'predynastic core' can be delineated comprising Wadis Kanais/Baramiya, Hajalij (S) and the first site in Wadi Miya. This area appears to have a connection with the further early rock-art in the Kom Ombo Drainage Basin outside of the EDS/RATS survey area. It is notable that boats dated to the predynastic massively outnumber pharaonic and later vessels by a ratio of ten to one. An area separate in geography and style, but equally predynastic in character, can be seen in Wadis Umm Salam and Umm Hajalij (N). In these wadis early 'desert boats' images are also an overwhelming feature. In contrast, Wadi Abu Mu Awad stands out as a southern wadi running west-east which contains mainly late sites. It is clear that this wadi was a route to some of the main gold mines in the Eastern Desert, those at Bir Dagbag just to the east of the survey area. The marking of such routes and the paucity of pharaonic images close to the Red Sea coast where a considerable presence might be expected (Judd, 2009) emphasises the importance of gold mining in the pharaonic era. Although predynastic sites are often located in the same areas as pharaonic sites, only a small minority are 'Mixed,' where one finds both recognizable predynastic and dynastic motifs together. The later rock-art creators, who in the pharaonic area preferred to add a small number of boats, Horus falcons or other late images, recorded their progress on the way to their destination. This is in contrast to the probably ritual character of the earlier scenes.

9.3.2 Dating: The Central Region

In contrast to the heavily covered early southern area, the core central zone around Wadis Shalul and Abu Iqaydi contains very little predynastic rock-art. Thus, it appears that travellers who created petroglyphs from northern entry points from the Naqada culture confined their activities to the northern half of the Central Eastern Desert, and 'southerners' to the southern

half. This pattern is different from that evident in the pharaonic era. The additional evidence of hieroglyphic inscriptions, coupled with pharaonic boats and other dynastic motifs, indicates far-ranging travel to the mines, quarries and the Red Sea. There are additional pharaonic inscriptions, boats and falcons at Bir Dagbag, Bakariya-another mine, and in the vicinity of Berenike outside the survey area which confirm this. Moreover, some individuals' journeys throughout the survey area and into the Kom Ombo Drainage Basin can be traced from their names and titles in inscriptions. Many of the pharaonic images can therefore be connected to the 'road' from Hammamat down through Wadis Abu Wasil and Mineh probably going to Berenike or the mines of the Wadi Muweilhat area in the Kom Ombo Drainage Basin. Although there are a small number of hieroglyphs at Bir Shalul, the petroglyphs in this wadi are concentrated to the west of the well, which suggests a more direct route south. Wadi Baramiya has a considerable number of both predynastic and later images because of its 'junction' location, linking the Central Eastern Desert with the Kom Ombo Drainage Basin-both with many gold mines, and due to its being a direct route to the Red Sea.

Still in the overall central area, but in its northern section consisting of Wadis Abu Wasil and Mineh, the rock-art sites have characteristics common to both north and south. The predynastic petroglyph sites cluster at the heart of these wadis, particularly around WAS-10 (RME-26), which appears to have been especially well watered and thus an attractive location to animals and their hunters. These wadis, together with the northern ones, have 'frond' boats and predynastic hunting scenes, but fewer of each than the southern wadis. Abu Wasil is notable for the 'in-depth' site of WAS-10 with two unique features in the Central Eastern Desert rock-art: five figures in different scales in a boat, and an 'arms raised' plumed figure in a boat being dragged by several unusually well delineated figures. That this and other north-central/northern sites possess the boat, large figure(s) and hunting combination show overall the influence of the Naqada culture with the regional variation one would expect from this early period of Egyptian pre-history. The question as to whether this one large site, with a number of smaller but significant sites nearby, was considered so important that it was revisited many times must remain open due to the general lack of archaeology in the desert. The presence of what may be an elite family, given the scale of the figures, and the unique way of carrying bows and unusual plumes or horns, is indicated. This suggests that members of the deceased person's family may be represented here given the presence of related images on media in Nile valley funerary contexts. Although this exact grouping of figures is not

repeated elsewhere, the large central figures found at most predynastic sites may also be family members.

9.3.3 Dating: The Northern Region

The northern area contains Wadi Qash, which was part of the late Egyptian and Roman road to Berenike. Cave site QAS-3 (RME-18) was clearly a resting place for travellers from the Predynastic through into modern times. This was one stopping place on the route south-eastwards which included the other main cave site of MIN-14 (RME-24b). Wadi Hammamat was a direct route to the Red Sea, although we have a few pharaonic records of journeys to Punt this way, and also to the Bekhen-stone quarries where there is a large number of hieroglyphic inscriptions and some boats. However, there are less than half as many rock-art sites here as in Kanais/Baramiya and the early sites are particularly concentrated around a side wadi, the Wadi Abu Kue. Thus, the early sites here appear to be as connected to hunting, as in the south, rather than mainly journeys to the Red Sea and back. Once past the Bekhen-stone quarries petroglyphs are absent, even pharaonic examples. Hammamat additionally contains one site, HAM-4, which suggests that the D-Ware Naqada II d style boats are not contemporaneous with the ‘frond’ boats as several (most of the total of these sickle vessels in this wadi) are on top of the boulders which make up this rock shelter, with the ‘frond’ boats inside. This site, together with WAS-8 and QAS-3, demonstrate that, whereas the ‘frond’ vessels are almost invariably seen in association with groups of animals in hunting scenes, these ‘D-Ware’ boats generally lack context. This admittedly small sample mirrors the more restricted content of the pottery.

In the northern zone Wadi El Atwani presents a picture in contrast to other northern wadis, and indeed to most wadis in the Central Eastern Desert, in that it possesses no identifiable pharaonic rock-art at all. The only other wadis to have no pharaonic petroglyphs are Hajalij (S) and Umm Salam, although there are a few inscriptions in the latter. There are predynastic petroglyphs akin to those throughout the survey area in Atwani, but also the motifs of hands, ‘nets’ and ‘lizards/ crocodiles’ to which there is nothing comparable in the rest of the Eastern Desert. Horse and camel riders are present in this wadi, which are sometimes engaged in hunting, as they are elsewhere in the desert. Therefore, in the predynastic period and much later this was also a hunters’ wadi. Since it does not lead to the sea, mines or quarries, or indeed to anywhere that pharaonic Egyptians would have a motive to go, it was only used by

rock-art creators in two disparate time periods and shows a relationship between rock-art and hunting.

9.4 Interpreting the Rock-Art

9.4.1 The Predynastic Era

Hitherto, attempts at interpretation of the early petroglyphs have either interpreted the images as representing either a foreign elite (Winkler 1938, Rohl 2000) or the origins of pharaonic religion (Ćerviček 1993a & 1998, Fuchs 1989 & 1991, Huyge 2002, Wilkinson 2003, Van Craeynest 2004). There has also been a division between those ‘amateurs’ working in the desert and the professionals surveying, often as an adjunct of an archaeological mission, in areas close to the Nile Valley. With the exception of David Rohl, who launched the EDS efforts, the former have often been more interested in the desert experience and the act of recording the images than in explaining their purpose, and have been unconnected with an academic institution. Work by the ‘amateurs’ has concentrated on republishing RATS (accomplished in 2010) and a yet to be published republication of Winkler’s RME survey together with a biography. Judd (2009) was the first to publish a doctoral thesis based upon the EDS and RATS surveys, setting the Eastern Desert rock-art in the context of Nubia and the areas surrounding Egypt.

The environmental resources available to desert travellers over the millennia, in addition to the evidence of chroniclers and the local Bedouin, indicate that hunting all but large mammals such as elephant and giraffe has been possible right into modern times. Even though many of the wells are now dry, aquifers still provide water to support vegetation, trees and animals. Modern trips from the Nile to the Red Sea involving donkeys, both by local Bedu and an inscription survey team, show that travel through the desert even now is relatively easy. The early observation that there are a significant number of cattle images in the survey area, in addition to examples of ‘control’ led a number of survey participants (Morrow & Morrow 2000, Wilkinson 2003) to identify nomadic pastoralists in the petroglyph scenes and to relate their content and distribution to their search for pasture and water in the wadi system. The landscape could then be seen as “networks of places (water places, streams, grazing lands, shrubs, groups of trees, meeting places, religious places etc) selected according to their pastoral and effective resources, social, ritual, and symbolic importance in the actual cultural landscape” (Holl & Dueppen, 1999: 24). Images on the rock in certain areas could therefore be regarded as territorial markers. This contention was an early hypothesis of this

writer following Wilkinson (2003) but has been disproved here. As noted in Chapter Three, a significant presence of nomadic cattle herders north of Wadi Baramiya is unlikely, since most bovid examples appear to be wild and many are singletons. In addition, a number are portrayed being hunted, and it is hunting which is the pre-eminent activity of people in the Central Eastern Desert rock-art in the predynastic period. In particular, there are no depictions of large herds and herders that are observed in the Sahara which are seen as aids to initiation rites, (Holl, 2004: 126) and most groups of bovid images are pharaonic or later. Nor are the cattle and wild animals such as giraffe, elephant, ibex and antelope shown at a distance from each other.

The Egyptian desert rock-art should be studied in relation to the archaeological record, the local cultural setting and the landscape; for, “without this relationship it is a private preserve in which one interpretation is as good as any other” (Bradley, 2002: 37). Although archaeological context is generally lacking in the Eastern Desert, excavation has taken place at Laqeita (Debono; 1950, 1951) revealing evidence of a Badarian and Naqada I presence. Grinding stones indicate grain preparation, perhaps in plots watered by wadi flash floods. In Wadi Atulla just north of the Wadi Hammamat, graves of the nomadic Tasian culture (Friedman & Hobbs, 2002) and a probable Badarian burial on the coast of the Red Sea (Murray & Derry, 1923). In addition, in the Western Desert rock-art perhaps associated with Naqada material has been recorded (Darnell, 2002), as has pottery at Hierakonpolis (Friedman, 2002). There are also artefacts from Nile Valley sites: amulets, figurines, palettes, pottery, the Gebelein Linen and Hierakonpolis Tomb 100 painting which can be utilised.

The petroglyph evidence fits well into what we know about early Egyptian cultures. The Badarian population (4400-3900 BCE) pursued a mixed economy of cereal and wild plant collection, as well as cattle and small livestock husbandry. The Badarian culture appears to have been nomadic within the Nile Valley Assyt/Badari Middle Egypt area (Hendrickx, 2004; Wengrow, 2006). 5th millennium Khartoum Variant and Abkan cultures pursued a similar lifestyle (Sadr, 1991: 83). There is some evidence from Hierakonpolis of a specialised animal butchery zone in the Naqada I (c.a. 3900-3650 BCE) Period (Friedman, 2009a, 2011). Pastoral activity took place in the Nile Valley with cattle being fed on cut river plants (Hendrickx, 2004). The conclusion of the Cambridge Archaeological Journal ‘Genesis of the Pharaohs’ debate was that use of the desert for pastoralism immediately east of the Naqada culture heartland was unlikely. This is supported by Sadr (1991) who locates significant Nile

Valley hinterland pastoral activity at this time only in Upper Nubia. Large-scale 'ranching' therefore only developed in response to the demands for livestock of a sedentary civilisation. Although there is some evidence of small herds in the Kom Ombo Basin petroglyphs, their low number, and the difficulty of dating them to the Predynastic, together with the identification of bovid images in the Central Eastern Desert as mostly wild, supports this contention.

If we cannot relate the distribution of the rock-art to nomadic pastoralists, the importance of game hunting will be a better guide. Animals are the most frequent element depicted, present at nearly 90% of sites. The distribution of many animal images appears linked to their observation in the wadis. It is unsurprising that ibex are most common, as a rock climber would be expected in this area, as would antelope and ostrich since they are all able to survive in semi-desert conditions. The presence of acacia would also have been suitable for giraffe. Surprising elements are the depictions of riverine animals in the desert, especially when shown being hunted-which contrasts with the absence of such scenes in the Nile Valley, and the concentration of elephant images in Wadi El Atwani. Representations of hunting riverine animals are rare, constituting only fifteen depictions, and are associated often with boats and 'arms raised' figures. The presence of two out of three elephant hunting scenes and a quarter of the total number of elephant images in Wadi El Atwani is significant as the wadi floor is strewn with boulders, and is difficult for people to negotiate it, let alone large mammals. Most of these depictions are associated directly with, or are present at, sites with predynastic boats. Both of these hunting situations therefore suggest a ritual connection. Indeed, for much of its early history the Central Eastern Desert was a ritual landscape par excellence, connecting desert with valley. Two-thirds of hunting scenes with human hunters involved are associated with boats. Those which are not, along with the examples of dogs alone hunting, may represent the activities of the elusive desert dwellers, or of hunting parties from the Nile Valley in later periods. The generic nature of these scenes makes it impossible to differentiate. We can account for the small size of hunting groups because of the prevalence of dogs. Since so many hunters used dogs and/or bows, small hunting groups could be effective.

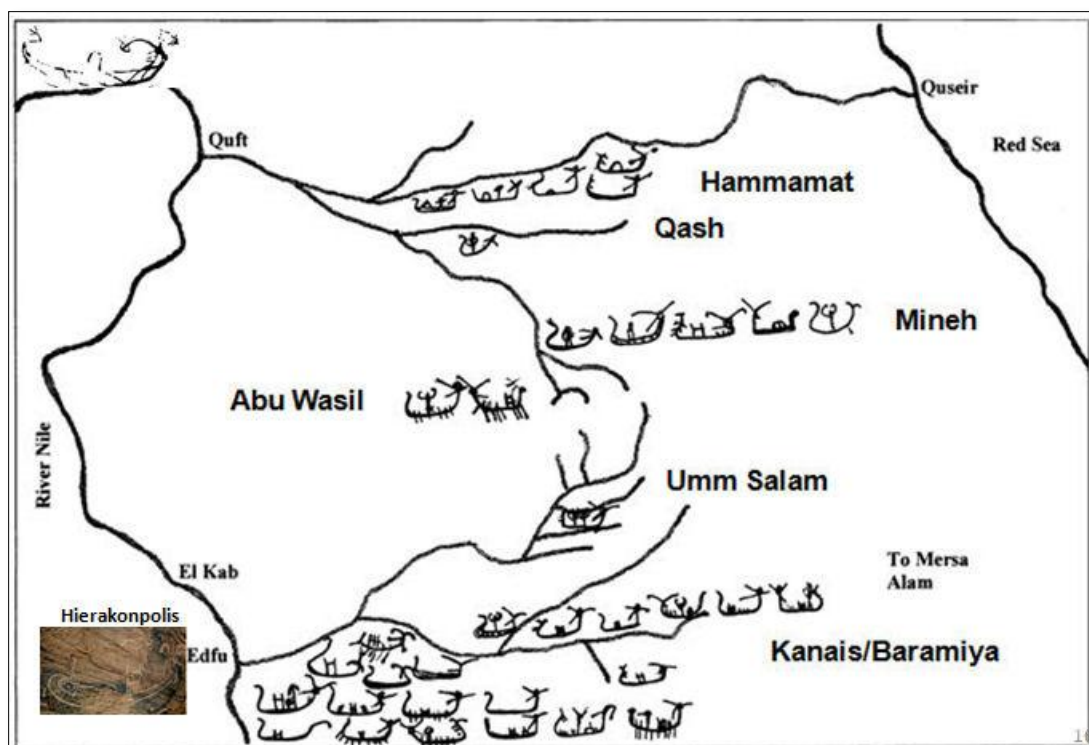
Very few animal depictions appear to be based on keen observation, elephants particularly so. Boats are somewhat better delineated, although even here half the latter are indeed simply hulls. Among the remainder the detail is sufficient to suggest that the petroglyph creator was

closely familiar with a particular vessel. Those in the 'Integrated' scenes, the 'frond' boats and the pharaonic vessels are the most detailed. Thus, a considerable amount of the early rock-art represents ritual activity by the Naqada culture elite. A number of the animals, such as wild cattle and antelope would have come to the river to drink-such that it has been suggested that hunting would have taken place near to the valley settlements (Linseele & Van Neer, 2009: 62). However, the rock-art shows that hunting in the desert was seen as a necessary ritual activity rather than to gain food. Hippopotamus and crocodile hunting, and the dragging of boats-both Nile Valley activities, are seen in conjunction with the hunting of desert animals. The integrated nature of the tableaux and the resonance of dance displayed by the 'arms raised' figures display the power to control the wild. To accomplish this a small hunting group would undertake an expedition, which could have been completed in around a week-a not over-demanding task. Unfortunately, due to the lack of archaeological material, it is not possible to determine whether the petroglyph sites were continually revisited. Their general small scale (the largest having around a hundred images) gives the impression of brief stops during hunting expeditions.

If we place the Central Eastern Desert evidence within the context of Egyptian rock-art overall, we can also trace the development of the Egyptian state. In the early predynastic period travellers from a number of independent centres in the Naqada culture went into the desert in order to conduct ritual hunting. We can also see a particular link between the boat petroglyphs at Kanais and those in the valley at Hierakonpolis. But the variety of expression within a common culture, as shown by the widespread distribution of the 'frond' boats (Map 1) and 'arms raised' figures, suggests diverse elite groups from several centres operating at this time. However, the 'frond' boats are limited to an area bounded by Wadi Hammamat in the north and Gebel Silsila in the south-in other words the core area of the early Naqada culture. Evidence particularly from Hierakonpolis and Mahasna indicates that hunting, feasting and animal burial were important elite activities. In this period graves near Laqeita, and even evidence of shelters, indicates a close relationship between Nile Valley and desert (Debono, 1950 & 1951). In the Naqada II c/d period there is very little depiction of activity in the desert rock-art, and such as there is seems to relate in the southern wadis to the sickle boats seen in T100 (dated to Naqada II c) and in the north to images on D-Ware pottery. The D-Ware pottery certainly continues to show a connection between valley and desert in its portrayal of desert fauna and animal 'control,' but there is a move from overt display of

imperishable images on rock to the burial of these for the benefit of the person in his/her grave where they would only be seen by the deceased.

In Naqada III, which straddles the Protodynastic and Early Dynastic periods, only three boats and three serekhs, two of Narmer, can be found in the survey area. The distribution of Naqada III boats in Egypt and Nubia (Map 2), with a massive concentration at Sayala (Engelmayer, 1965) shows the progress of Egyptian expansion. Moreover, the presence of many Naqada III motifs at 'Dominion Behind Thebes,' together with the Gebel Tjauti tableau, mirrors the shift of power towards the northern Naqada culture territory dominated by This (Abydos) towards the end of the Protodynastic period, allied with an extension southwards of the Naqada culture into Lower Nubia. Depictions of Naqada III style boats in the latter area at Gebel Sheikh Suleiman and on the Qustul incense burner show these vessels engaged in combat-a rare activity apart from the battle on the Gebel Arak knife handle. In contrast, the few Naqada III boats in the Central Eastern Desert are singletons devoid of context. The precipitate decline in depictions during this period may be accounted for by the decline in the number of independent elite lineage groups as one royal family emerged in the state formation process. The focus of a united Upper Egypt was directed to the west of the Nile and south into Nubia.



Map 1, Distribution of 'frond' boats in the CED and relationship to related petroglyphs at Hierakonpolis and clay box found at Al Amrah, now in the Ashmolean Museum, Oxford.



Map 2, Distribution of Naqada III boats showing little presence in the Central Eastern Desert but concentrations at El Kab, 'Dominion Behind Thebes,' and in Lower Nubia

9.4.2 The Pharaonic Era

Throughout the pharaonic period the desert was a resource exploited for its mineral resources, in particular gold and Bekhen stone. There is textual evidence that pharaohs only sent one, or at most and untypically, two or three, mining expeditions during their reigns (Breasted, 1906; Harrell, 2002: 239). Therefore, the approximately 100 pharaonic boats and 200 hieroglyphic inscriptions outside of the Hammamat quarries support the contention that these activities were not on an industrial scale before the Greco-Roman era. The desert was still a resource for ritual action in the Nile Valley during this period. Gold in pharaonic face masks and stone for sarcophagi were utilised for their sacred preservative and regenerative powers. Finally, the quarries in the Red Sea hills provided columns and other elements for imperial buildings

in the Roman Empire. The boats, inscriptions and part-time shrines mark the routes to the gold mines and quarries, and on the trade route to India. The ‘ship’s captain’ inscriptions, and indeed, some or all of the dynastic boat images, may mark journeys of ship personnel to the Red Sea coast, or constitute evidence of the naval teams in charge of resource transportation. Given that the missions to secure materials to be used in mortuary situations were endowed with a sacred character, combined with the ritually powerful predynastic sites, the Central Eastern Desert (and the Kom Ombo drainage Basin sites) have ‘ritual depth’ cf. Diaz-Andreu, 2001) in that a minority can be determined as purely secular until the Roman period.

Large mammals such as elephant and giraffe no longer inhabited the Eastern Desert in the pharaonic era due to aridification, and perhaps to hunting. However, most game animals have only disappeared in very recent times due to hunters with modern weapons. If Egyptians wished to hunt in the desert, then they were able to do so. Therefore, the lack of scenes on D-Ware showing hunting with dogs and bows, as in the Central Eastern Desert, is probably due to the way control of wild animals was portrayed, not to the activity of hunting having ceased. Hunting continued into the proto-dynastic and dynastic periods while the king was appropriating the iconography of power, including power over the wild, as seen on the probably Early Dynastic scene at Gharb Aswan (Gatto: 2010:14), on palettes and in many pharaonic tomb paintings. Hunting scenes which are not in the ‘Integrated’ and ‘Associated’ scenes dateable to the Predynastic occur and may represent desert dwellers capturing animals for later slaughter in corralled areas in the Nile Valley. However, apart from the one inscription at Kanais referring to an elephant hunt, and two clearly pharaonic figures in the Wadi Hammamat, one with a bow and another carrying a staff (and these are not associated with animals) definite portrayals of hunting in the pharaonic period are hard to identify. Finally, at some point after the introduction of the camel into Egypt, and perhaps during the period in which the Blemmyes are reported in the half dozen centuries straddling the start of the 1st millennium AD, unique scenes of conflict involving horse and camel riders are seen in the Central Eastern Desert rock-art scenes.

9.5 The Frequency of the Rock-Art

While archaeological evidence in the Nile Valley mainly comes from sites near to the north of the survey area, the ‘frond’ boat/ ‘arms raised’ figure combination and the ‘Integrated’ scenes are overwhelmingly in the south of the Central Eastern Desert. Part of the explanation for this could be the uneven survival of evidence in Nile Valley sites, and of the distribution

of archaeological missions in Egypt. However, another factor may be the comparative rarity of the motifs in the rock-art, even in the mainly predynastic southern area. All of the 'Integrated' scenes do not have more than 60 boat petroglyphs between them, a considerable proportion of these being at 3 sites: Wadi Baramiya BAR-9 & BAR-10, and WAS-10 in the Wadi Abu Wasil. In addition, there are only 19 of these 'Integrated' scenes out of the 99 Predynastic and Mixed sites combined from the 246 overall in the survey area. Within this number, half are in Wadi Baramiya and the nearby side Wadi Hajalij (S). Moreover, 21 of the 34 'frond' boats are in Wadis Kanais/ Baramiya and Hajalij (S), 14 at Kanais Temple alone. This amounts to a limited number of petroglyphs within a limited area. A small number of people on a restricted number of visits could have made these petroglyphs. Most of the remaining petroglyphs dated to the Predynastic conform to the pattern on the C and D-Ware pottery: hunting scenes and the association of desert animals with boats respectively.

Support for the contention that what is shown in the rock-art is (rare) elite activity comes from the frequency of creation of the scenes. Since the 'Integrated' scenes and 'frond' boats constitute a small part of the rock-art and could have been made by a comparatively small number of people, how 'busy' would the Central Eastern Desert have been? There are few petroglyphs dateable to Naqada II c/d-III, and the predynastic activity probably mostly occurred in the late Naqada I c-Naqada II a/b period. This may have been 200 years, but perhaps less as the lack of secure C14 results for the Naqada era compared to the First Dynasty, means that dating rests largely on pottery seriation. Given that there are 75 'Predynastic' and 24 'Mixed' sites in the whole survey area, and that each 'Associated' and 'Integrated' scene is judged to have been made contemporaneously, this means a minimum of one site was created every 2½ years. Even if we take an extremely low (but potentially feasible) 100 years for this period, and assume a lack of revisiting, it only means the creation of one site per year over the whole of the Central Eastern Desert in this time-span. 63% of the predynastic sites are in the southern wadis, 28 % in the central ones, but only 5% in the core central ones, with just less than 10% in the north. If only those disposed to create rock-art travelled into the desert, even in a restricted time period of spring and winter, they would meet very few people there, if anyone at all-especially outside the southern wadis. This assumes hunting as an elite and/or specialist activity, given the paucity of wild faunal remains in domestic contexts in the Nile Valley except in elite areas. If each member of the small hunting party (3-4 persons usually portrayed) was responsible for their own site, then the frequency of travel could be even less. Given that there are 81 'Associated' and 'Integrated'

sites, it could reduce the number of trips to 10-15 over the whole period. This would fit with a rare and special event surrounding the death of a member of the elite.

Overall the pattern suggested by the time-span and number of sites is of few people involved in a restricted period of time, approximately 3800-3650 BCE, within the predynastic period. Overall, with the exception of the 'hand on hip' hunters, the impression is of a number of people making petroglyphs at one or two sites, not of one group going down a route responsible for numerous sites. This is true even of narrow and quite straight wadis such as Umm Salam which are easy under foot to navigate. One site will consist of several ibex with a human figure, the next a few boats, followed by a major 'Integrated' site, and then again a small herd of animals. Considering the last 6000 years, there are approximately 500 separate surfaces on which petroglyphs have been made. Even assuming the addition of three petroglyph scenes of different dates at each surface means one creation every four years, and one every 2-3 years over only the predynastic and pharaonic periods. Rock-art creation in the survey area was thus a rare event.

9.6 Future Opportunities for Research

This thesis presents a significant contribution towards the study of Egyptian petroglyphs and, by covering a considerable proportion of the Central Eastern Desert, fills a gap in our knowledge of the rock-art of that country. However, there remain a number of facets of the rock-art of this area which deserve further investigation. The last work of the EDS south of Baramiya has yet to be published and the means of accomplishing this must be resolved. With a number of recording teams active in Egypt, this will aid the compilation of a comprehensive review of its rock-art. It will enable a synthesis of the material from the east with that found west of the Nile and in the area around Aswan, in particular combining the earlier material from the Central Eastern Desert with the Naqada III examples west of Thebes. The spatial and associative relationship between individual components on each rock face has also not been examined in detail. Moreover, although a broad connection has been made between the predynastic petroglyphs and C and D Ware pottery, a closer look at the similarities (and differences) between the media of rock and ceramic is needed. There are also areas of the country which still provide opportunities for exploration and recording, notably those parts of Wadi Midriq and its environs not completely recorded by the EDS.

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Appendix One: Wadi Name Abbreviations

Southern Wadis	
Umm Hajalij South	HAI (S)
Kanais	KAN
Baramiya	BAR
Miya	MIY
Umm Hajalij North	HAI (N)
Umm Salam	SAL
Abu Mu Awad	MUA
Central Wadis	
Shalul	SHA
Dahabiya	DAH
Abu Iqaydi	IQA
Abu Wasil	WAS
Mineh	MIN
Northern Wadis	
Qash	QAS
Hammamat	HAM
El Atwani	ATW

Appendix Two: Chapter Four-Animals-Sites & Images by Area

Wadi Animal	Hajs	Kan	Bar	Miy	Hajn	Sal	Mua	Iqa	DAH	SHA	Min	Was	Qas	Ham	Atw	Total
Crocodiles	1 2%	0 0	3 6%	0 0	0 0	5 10%	2 4%	1 2%	1 2%	0 0	2 4%	0 0	2 4%	0 4%	30 64%	47
Sites	1 6%	0 0	3 18%	0 0	0 0	5 29%	2 12%	1 6%	1 6%	0 0	1 6%	0 0	1 6%	0 0	2 12%	17 7%
Hippopotami	0 0	2 7%	3 10%	0 0	3 10%	13 43%	2 7%	0 0	0 0	1 3.5%	1 3.5%	1 3.5%	3 10%	1 3.5%	0 0	30
Sites	0 0	2 8%	3 12%	0 0	3 12%	10 40%	2 8%	0 0	0 0	1 4%	1 4%	1 4%	1 4%	1 4%	0 0	25 10%
Elephants	0 0	1 2%	2 5%	7 16.5%	0 0	7 16.5%	1 2%	0 0	0 0	0 0	1 2%	6 14%	1 2%	6 14%	11 25%	43
Sites	0 0	1 4%	2 7%	1 4%	0 0	6 23%	1 4%	0 0	0 0	0 0	1 4%	5 19%	1 4%	4 15%	6 23%	27 11%
Giraffes	1 1%	0 0	15 17%	3 3%	5 6%	34 39.5%	5 6%	2 2%	0 0	6 7%	7 8%	1 1%	3 4%	2 2%	2 2%	86
Sites	1 2%	0 0	8 17%	1 2%	3 6%	16 35%	4 8%	1 2%	0 0	2 4%	5 11%	1 2%	2 4%	1 2%	1 2%	46 19%
Asses	4 2%	0 0	21 20.5%	0 0	13 13%	36 37%	1 1%	1 1%	0 0	10 10%	0 0	4 4%	0 0	7 7%	3 3%	103
Sites	1 2.5%	0 0	10 25%	0 0	3 7.5%	16 46%	1 2.5%	1 2.5%	0 0	2 5%	0 0%	3 7.5%	0 0	2 5%	1 2.5%	40 16%
Cattle	2 <1%	6 2%	57 20.5%	21 7.5%	10 3.5%	43 15%	14 5%	12 4%	0 0	11 4%	30 11%	40 14%	13 4.5%	22 7.5%	9 3%	290
Sites	1 <1%	2 2%	23 22%	3 3%	5 5%	20 20%	5 5%	5 5%	0 0	6 6%	13 13%	12 12%	1 <1	7 6%	5 5%	110 44%
Ibex	6 1%	2 <1%	54 11%	20 4%	21 4%	147 30%	40 8%	36 7%	2 <1%	23 5%	35 7%	21 4%	24 4.5%	41 8%	33 7%	505
Sites	2 1%	1 <1	23 15%	3 2%	4 2%	38 24.5%	12 8%	12 8%	2 1%	11 8%	12 8%	10 7%	5 3%	11 7%	6 4%	156 60%
Antelope	4 1%	2 <1%	49 15.5%	15 5%	13 4%	80 25.5%	22 7%	18 6%	2 <1%	22 7%	24 8%	23 8%	12 4%	32 9%	9 3%	327
Sites	1 <1%	1 <1%	13 12%	3 3%	6 5%	29 26%	10 9%	4 3%	1 <1%	7 6%	9 8%	12 11%	4 3%	10 9%	4 3%	113 45%
Dogs	4 1%	4 1%	58 18.5%	13 4%	16 6%	96 31%	16 6%	15 6%	3 1%	21 6%	20 6%	20 6%	9 2.5%	19 6%	8 2%	317
Sites	2 2%	1 1%	16 16%	3 3%	5 6%	28 28%	7 7%	8 8%	1 1%	6 6%	6 6%	4 4%	3 3%	9 7%	3 3%	102 40%

Ostriches	2 <1%	4 <1%	64 14.5%	3 <1%	30 7%	154 35%	37 8%	13 3%	4 <1%	38 8.5%	30 7%	38 8.5%	8 1%	18 3%	6 1%	449
Sites	2 2%	2 2%	12 13%	1 1%	6 6%	20 21%	7 7.5%	6 6%	2 2%	8 8%	10 11%	6 6%	1 1%	8 8%	3 3%	95 38%

Table 4.2. Distribution of animal petroglyphs by wadi in the Central Eastern Desert by number of images & sites

		SOUTH 129 (52%)	CENTRAL 81 (33%)	NORTH 38 (14.5%)	TOTAL 248
CROCODILE	SITES	11 (65%)	3 (17.5%)	3 (17.5%)	17
	IMAGES	11 (23%)	4 (8.5%)	32 (68%)	47
HIPPOPOTAMUS	SITES	20 (80%)	3 (12%)	2 (8%)	25
	IMAGES	23 (76.5%)	3 (10%)	4 (13%)	30
ELEPHANT	SITES	11 (41%)	6 (22%)	10 (37%)	27
	IMAGES	18 (43%)	7 (16.5%)	17 (40.5%)	42
GIRAFFE	SITES	33 (72%)	9 (19.5%)	4 (9%)	46
	IMAGES	63 (73%)	16 (18.5%)	7 (8%)	86
ASSES	SITES	31 (77.5%)	6 (15%)	3 (7.5%)	40
	IMAGES	78 (76%)	15 (14.5%)	10 (10%)	103
CATTLE	SITES	61 (56%)	36 (33%)	12 (11%)	109
	IMAGES	143 (51%)	103 (37%)	34 (12%)	280
IBEX	SITES	83 (54.5%)	47 (31%)	22 (14.5%)	152
	IMAGES	290 (60%)	117 (24%)	76 (16%)	483
ANTELOPE	SITES	63 (55%)	33 (29%)	18 (16%)	114
	IMAGES	185 (56.5%)	89 (27%)	53 (16%)	327
DOGS	SITES	62 (61%)	25 (24.5%)	15 (14.5%)	102
	IMAGES	207 (64%)	79 (24.5%)	36 (11%)	322
OSTRICH	SITES	50 (54%)	32 (34%)	11 (12%)	93
	IMAGES	294 (68%)	113 (26%)	24 (6%)	431
					2151

Table 4.3, Animals-Distribution by sites & images by area

Appendix Three: Chapter Five-Human Images

Wadi	Sites	Sites with figures	% of sites with figures	Figures	% of total no. of figures
Hajalij S	2	2	100	20	2
Kanais	4	3	75	39	4.5
Baramiya	39	29	74	126	14.5
Miya	7	4	57	27	3
Hajalij N	9	9	100	53	6
Umm Salam	46	38	82.5	161	19
Abu Mu Awad	22	17	77	65	7.5
Abu Iqaydi	15	12	80	29	3
Dahabiya	2	2	100	3	0.4
Shalul	14	10	71	17	2
Abu Wasil	26	23	88	106	12
Mineh	24	22	91	82	9
Qash	6	6	100	48	5.5
Hammamat	19	17	89	48	5.5
Atwani	13	10	77	35	4
	248	204 (82%)		859	

Table 1, Distribution of human figures per wadi

Type	Predynastic	Pharaonic/Late	Total
Realistic	196 (64%)	6 (2%)	202 (66%)
Stick	10 (3.5%)	4 (1%)	14 (5%)
Triangular	5 (2%)	5 (2%)	10 (3.5%)
Naqada	7 (2%)	0	7 (2%)
Pharaonic	0	28 (10%)	28 (10%)
Other	31 (11%)	11 (3%)	42 (14%)
Total	249 (82%)	54 (12%)	303 (35%)

Table 3, Date of figures by type

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	
1 plume	1	6	12	4	22	0	8	2	0	3	8	6	3	2	2	79 (38%)
2 plumes	7	1	10	2	25	0	4	4	0	1	26	13	3	2	3	100 (48%)
3+ plumes	1	3	2	2	11	2	2	0	0	1	5	0	1	0	0	30 (14%)
Total	9	10	24	8	58	2	14	6	0	5	39	19	7	4	5	209 (24%)

Table 4, Figures wearing plume(s) per wadi

Plumes	Realistic	Stick	Triangular	Pharaonic	Naqada	Other	Not illustrated
1	45	18	0	0	0	5	8
2	69	14	3	7	0	7	6
3+	26	1	0	0	0	1	1
Total	140	33	3	7	0	13	15
210	(66%)	(16%)	(1.5%)	(3%)	(0%)	(6%)	(7%)

Table 5, Plumed figures by figure type

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	
Bow	0	4	31	7	5	2	8	2	0	5	16	13	3	3	2	0
Throw-stick	0	0	0	0	2	0	1	0	0	0	3	0	0	0	0	0

Table 6, Figures holding a bow or throw-stick, Total: 106

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	
Realistic	0	4	19	6	5	2	5	1	0	2	15	12	2	1	2	0
Stick	0	0	4	0	0	0	3	0	0	3	1	1	0	0	0	0
Triangular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pharaonic	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Other	0	0	1	1	0	0	0	1	0	0	0	0	1	1	0	0
Total	0	4	24	7	5	2	8	2	0	5	16	13	3	3	2	0

Table 7, Illustrated Figures holding a bow by type per wadi

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM
Staff	1	0	1	2	8	0	1	0	0	0	2	5	0	1
Spear	0	0	0	0	0	0	0	1	0	2	1	0	0	1
Sword & Shield	0	0	0	1	2	0	2	0	0	4	0	0	2	0

Table 8, Figures holding a staff, spear, or sword and shield Total: 38

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW
Animal control	2	1	14	6	13	4	6	4	0	4	6	3	7	1	3
Percentage	3%	1.5%	18%	8%	18%	6%	10%	6%	0%	5%	10%	5%	10%	1.5%	5%

Table 9, Figures ‘controlling’ an animal Total: 73

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Cattle	1 R	1R	10R	2R/1 N/ill	8R	1 R/ 2 Tri.	5R	1R	0	2 Stick	5R	2R	2R	0	3R	45 5%
Hippo	0	0	3R	2R	2R 1 Stick	0	0	0	0	0	0	0	3R/ 2 Stick	0	0	13 1.5 %
Croc	0	0	1R	1R	0	0	0	0	0	0	0	0	0	0	0	2 <1%
Ibex	0	0	0	0	1R	1R		1R	0	0	0	0	0	0	0	3
‘Giraffe’	0	0	0	0	0	0	0	0	0	1R	0	0	0	0	0	1
Ostrich	0	0	0	0	0	0	0	0	0	0	1R	1R	0	0	0	2
Dog	0	0	0	0	0	0	0	0	0	1R	0	0	0	0	0	1
Not identified	1R	0	0	0	1	0	1 Stick	2 Stick	0	0	0	0	0	1 Stick	0	5
Total	2	1	14	6	13	4	6	4	0	4	6	3	7	1	3	74 (8%)

Table 10, Figures controlling an animal R=Realistic, Tri=Triangular

Wadi	Kan	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	7	8	21	19	51	3	6	7	2	3	33	24	7	7	6	186
Stick	0	0	1	0	2	0	7	3	0	6	4	2	4	1	4	33
Triangular	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
Pharaonic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	1	7	2	0	0	0	0	0	0	0	0	3	0	13
Total	7	8	40	26	55	4	15	10	2	9	37	26	11	11	10	254
Percentage of hunting figures	3	3	16	11	23	1.5	6	4	1	4	16	11	4	4.5	4	29.5% of non-rider figures

Table 11, Figures engaged in hunting per wadi Total: 254

Wadi	HAJS	KAN	BAR	MIY	HAJN	SAL	MUA	SHA	IQA	DAH	WAS	MIN	QAS	HAM	ATW	Total
Sites	1	1	7	1	0	6	1	0	0	0	1	4	1	4	2	29
Percentage of sites per wadi	50%	25%	18%	14%	0	13%	1%	0	0	0	4%	16%	16%	22%	16%	
Number of figures	3	9	11	2	0	10	1	0	1	0	3	6	10	5	3	62
Percentage of total figures	5%	15.5%	15.5%	3.5%	0	17%	2%	0	0	0	2%	10%	17%	8.5%	5%	

Table 12, Number and percentages of ‘arms raised’ figures

Location: number and percentage of wadis in each area	South (129) (52%)	Central (81) (32%) (32.5%)	North (38) (15%)
Sites with ‘arms raised’ figures	17 (58.5%)	5 (17%)	7 (24.5%)
Figures	36 (57.5%)	8 (12 %)	18 (30.5%)

Table 13, Distribution of Arms Raised Figures by area, sites, and number of figures

Wadi	HAJS	KAN	BAR	MIY	HAJN	SAL	MUA	SHA	IQA	DAH	WAS	MIN	QAS	HAM	ATW
Realistic	0	0	1	2	0	2	1	0	1	1	6	0	2	0	0
Stick	0	0	0	0	2	1	1	0	1	0	0	0	1	1	0
Triangular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pharaonic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	2	0	0	0	1	1	1	0	0	0	0	1	2	2
Total	1	2	1	2	2	4	3	1	2	1	6	0	4	3	2

Table 14, figures with arms raised but not incurved

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Number of figures	10	6	43	10	38	9	15	13	0	6	33	26	8	10	10	237
Percentage of all figures	4	2	21	6	15	4	6	4.5	0	0.4	15.5	11	3	4.5	4	28%
Number of sites	2	2	20	3	17	3	6	3	0	4	13	13	3	7	5	101
% of sites in wadi	50	100	51	33	37	43	27	13	0	28	50	52	50	37	38	41

Table 15, Figures in boats per wadi

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Number of boats	7	6	40	7	27	4	8	6	0	4	26	18	7	7	8	174
Percentage of a) all boats b) with figure	0.8 4	0.8 4	4.5 23	0.8 4	3 15.5	0.6 3	1 4.5	0.8 4	0 0	0.6 3	3 15.5	2 10	0.8 4	0.8 4	1 4.5	20%
1 Figure	5	6	38	5	23	2	5	3	0	2	17	17	6	9	6	136 79%
2 Figures	1	0	1	1	4	1	2	2	0	2	2	3	1	1	2	23 13%
3+ Figures	1	0	1	1	2	2	1	2	0	0	2	1	0	1	0	14 8%

Table 16 Figures in boats per wadi by number of figures in each boat

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	5	2	14	8	12	0	5	0	0	1	22	8	5	3	2	84 (35%)
Stick	0	0	8	1	14	0	3	1	0	0	4	4	1	2	2	39 (16%)
Triangular	0	0	4	0	0	0	1	4	0	0	0	0	0	0	0	9 (4%)
Pharaonic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0%)
Other	4	2	19	2	9	9	6	6	0	1	8	8	2	4	6	85 (35%)
Not illustrated	0	1	9	0	1	0	0	0	0	0	3	6	0	2	0	21 (9%)
Total	9 (4%)	5 (2%)	52 (19%)	11 (4.5%)	36 (15%)	9 (4%)	15 (6%)	11 (4.5%)	0	2 (1%)	37 (15%)	26 (11%)	8 (4%)	11 (4.5%)	10 (4%)	245

Table 17, Figures in boats by type per wadi

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	0	5	1	0	1	0	0	0	0	1	2	0	0	0	0	10
Stick	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	5
Triangular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	5	1	0	1	0	2	0	0	4	2	0	0	0	0	15

Table 18, Figures with one plume carrying a bow

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	0	2	0	0	1	0	0	0	0	1	2	2	0	0	0	8
Stick	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
Triangular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	1	0	0	0	0	2	4	2	0	0	0	11

Table 19, Figures with two plumes carrying a bow

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	4
Stick	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Triangular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	1	1	0	0	0	1	0	0	0	0	5

Table 20, Figures with 3+ plumes carrying a bow

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	0	0	0	3	3	0	0	0	0	0	0	1	0	0	0	7
Stick	0	0	1	0	1	0	2	0	0	0	0	0	1	0	0	5
Triangular	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Other	1	3	1	2	0	1	0	0	0	0	0	1	0	2	2	12
Total		3	6	5	4	1	2	0	0	0	0	2	1	2	2	28

Table 21 Figure with one plume in boat

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	1	0	3	0	4	0	1	0	0	0	5	3	1	1	1	20
Stick	0	0	0	0	3	0	1	0	0	0	0	0	0	0	1	5
Triangular	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Other	1	0	0	0	3	0	0	1	0	0	3	0	0	0	0	8
Total	2	0	3	0	10	0	2	2	0	0	8	3	1	1	2	34

Table 22, Figures with two plumes in boat

Wadi	KAN	HAJS	BAR	HAJN	SAL	MIY	MUA	IQA	DAH	SHA	WAS	MIN	QAS	HAM	ATW	Total
Realistic	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
Stick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Triangular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2

Table 23, Figures with three or more plumes in a boat

Figures with plumes in a boat Total: 64 Realistic: 29 (45%) Stick: 10 (15.5%) Triangular: 0
Other: 20 (31%)

Appendix Four: Chapter 6-Boat Images

Area	Sickle Types	Square Types
South (48%)	191 (59%) (23%)	349 (60%) (42%)
Central (38%)	66 (20%) (8%)	176 (30%) (21%)
North (14%)	67 (20%) (8%)	53 (9 %) (6%)

Table 1: Sickle & Square types per area

Area	Incurved Sickle	Incurved Square	Flared
South	19 (47%)	19 (50%)	42 (95.5%)
Central	6 (16%)	11 (29%)	1 (2%)
North	14 (36%)	8 (21%)	1 (2%)

Table 2: number & distribution of Incurved Sickle, Incurved Square, and Flared boats per area

Appendix Five: Chapter Seven-Site Orientation & Height

Wadi	North	North -East	North -West	South	South -East	South -West	West	East	Sites
Kanais	2	0	0	2	0	0	0	0	4
Hajalij South	0	0	0	1	0	0	1	0	2
Baramiya	14	4	4	5	4	0	2	4	39
Miya	1	1	2	2	0	0	1	0	7
Hajalij North	3	2	0	2	0	0	1	1	9
Umm Salam	18	8	7	7	2	0	1	3	46
Abu Mu Awad	4	2	3	4	2	1	2	3	21
Southern Area	41	17	16	23	7	1	8	11	128
	75 (59%)			31 (25.5%)			8 (6%)	11 (6%)	
Iqaydi	1	3	3	0	0	0	3	5	15
Dahabiya	0	1	0	0	0	0	0	1	2
Shalul	4	1	0	1	1	0	3	4	14
Abu Wasil	4	6	1	5	5	0	2	4	26
Mineh	7	4	2	3	3	2	2	1	24
Central Area	16	15	7	9	9	2	10	15	81

	37 (47%)			20 (23%)			10 (12%)	15 (18%)	
Qash	0	0	0	0	0	0	0	3	6
Hammamat	1	2	2	3	3	0	0	4	16
Atwani	4	1	1	1	1	1	1	1	13*
Northern Area	5	3	3	4	4	1	1	8	32
	11 (34%)			9 (28%)			1 (3%)	8 (28%)	
Total	53	34	23	34	20	4	19	34	246
Total N/S/W/E	122 (52%)			60 (25%)			19 (8%)	35 (15%)	

Table 1, Orientation of sites in the Central Eastern Desert * includes two examples facing upwards

Wadi	HAJS	KAN	BAR	MIY	HAJN	SAL	MUA	SHA	IQA	DAH	WAS	MIN	QAS	HAM	ATW
Sites	2	3	31	5	8	42	21	13	15	2	18	14	6	12	10
% in wadi	100%	75 %	80%	71%	89%	91 %	100 %	93%	100%	100%	70%	64%	100%	66%	77%

Table 2, Sites at 'Low' level (0-5 metres) in the Central Eastern Desert: 199 (81%)

Wadi	HAJS	KAN	BAR	MIY	HAJN	SAL	MUA	SHA	IQA	DAH	WAS	MIN	QAS	HAM	ATW
Sites	0	1	5	1	1	2	0	0	0	0	5	6	0	3	0
% of sites		25%	13%	14%	11%	4%					19%	25%		16.5%	

Table 3, Sites at a ‘Medium’ (6-10 metres) level in the Central Eastern Desert: 24/10%

Wadi	HAJS	KAN	BAR	MIY	HAJN	SAL	MUA	SHA	IQA	DAH	WAS	MIN	QAS	HAM	ATW
Sites	0	0	1	1	0	1	0	1	0	0	1	3	0	1	3
% in wadi			2.5%	14%	0%	2%		7%			4%	12%		5.5%	23%

Table 4, ‘High’ (11+ metres) sites in the Central Eastern Desert: 12/5%

Appendix Six

Dating of Sites

Sites will be classified regarding boat petroglyphs as ‘Predynastic (P),’ ‘Possibly Predynastic (PP),’ and these combined as ‘**P**’. ‘Dynastic/Late (L), and ‘Unidentified (U),’ while **M** represents sites where both Predynastic and Late elements are present (see Table 1, Chapter Seven).

Wadi Kanais

KAN-1: incurved boats with two and three ‘fronds’ at the stern are the norm here (P: 10) (**P**) and at KAN-2 (P: 12) (**P**). These two Kanais sites are close to each other, as the former is a large rock in front of the latter, and have many related motifs. KAN-3 has a single central-masted boat (L), while KAN-4 contains a rare family group, but no other motifs (U).

Wadi Baramiya

BAR-1: The boulder in front of the main face has camels, horses and Blemmye marks. A boat with a sail and ridden camels are present on a further boulder right of the first. The main face has a Horus falcon, hippo and sphinx in a similar naturalistic outline style very different from the arms raised figures and predynastic boat motifs. An ostrich overlays three club-ended boats similar to those in the Naqada II dated T100 painting (Červíček’s Type I). These are the only three obviously recognizable Naqada motifs among the petroglyphs here. (P: 3 L: 1) (**M**)

BAR-2 contains both ‘frond’ boats and a Horus falcon. Apart from one sickle boat with a mast, there are also several with the ‘T’ feature. (P: 8, L: 1) (**M**)

BAR-3 contains a number of flared boats found overwhelmingly in the southern wadis, but no other dateable context. (U) BAR-4 is a considerable boat site since there are nineteen found here with very few animal depictions. Most of the boat images have the same patination on the same rock surface directly opposite the mouth of Wadi Hajalij (S). It is notable that an ‘arms raised’ figure stands centrally in the incurved boat at the top and that there is a considerable variety in design. Given our lack of knowledge concerning the rate at which the varnish of Eastern Desert rock surfaces changes in its degree of patination, we cannot automatically assume that all the images are contemporaneous, but have to accept that

with the same patination they are close in date. Nor is it unusual for scenes of clearly associated predynastic vessels to be composed of different types. BAR-9 is a good example of this. (P: 15) (P)

BAR-5 is described in the Eastern Desert Survey (EDS: 27) as having two highly stylized square boats with frond decorations at the prow, but these are not illustrated. This site must be relocated and until properly recorded cannot be classified. (U) BAR-6 has no illustrations but is noted as having two boats with sails and camels, so the vessels are late. (L: 2) (L) BAR-7 comprises a boat with a single hands-on-hips single feathered figure amidships. Such examples tend to be predynastic and many animals are present. Three 'boats' are noted but no further details given. (PP: 1) (P) BAR-8 is a problematic site in that on the main face there is a square boat with a single feathered figure amidships and a single-plumed figure controlling a bovid. These motifs might suggest a predynastic dating. However, a nearby hieroglyphic inscription (reading, "The good god, Lord of the Two Lands, Akheperkare-meryamun: Tuthmose I") has similar patination. This suggests that these motifs are close or contemporaneous and argue strongly against a predynastic dating. (L: 1) To the left of this surface an 'arms raised' figure stands among ibexes with no boat, present indicating that this part of the site is predynastic. (M) BAR-9, on a smooth rock surface under an overhang closed to the modern road, does provide the context of a variety of associated motifs such as the incurved boat with arms raised figure amidships, animals and other human figures. The former is a predynastic marker. Apart from a horse and rider and two other equids-both of much lighter patination, all the other motifs hang together in context as a tableau. A single obviously pharaonic vessel is located five metres to the left, presumably because there was no room left on the main surface. Fuchs' (1991) drawings have been combined to show the integrity of this scene, akin to a panorama. It contains six boats of varying designs, six figures controlling animals-including a crocodile, dogs hunting, and double-plumed figures. At this site, all the five boats have crew indicated. The largest vessel has a crew of sixty-nine and is being dragged by seven figures, shown by simple lines. There is an unusual almost vertical line very near the prow ending in a triangular shaped appendage. This is much too small to be a sail, and may therefore be some kind of standard. (P: 6, L: 1) (M)

BAR-10, another site close to the modern road, is a shady resting place and has been a popular lunch spot with survey groups. Nineteen boats are found here, in addition to single and double-plumed figures. In a dragged boat a figure stands with arms raised to head level

but not curved inwards in the classic ‘arms raised’ pose, while seven hands-on-hips figures are present in another boat. Hunting scenes include hunters with bows, and dogs running down and catching hold of prey. There is also one asymmetrical boat with an extremely high prow. Such boats are linked by both Cervicek and Engelmayer to the T100 ‘black boat.’ In addition, a single-plumed figure in a square boat points to the West. Illustrations of dynastic vessels do not show completely symmetrical square boats, so this motif may be predynastic too. To the right of this panel is a square boat with a central ‘arms raised’ figure. (P: 6) **(P)** BAR-11 consists of a single clearly pharaonic ship with sail and triangular bladed oar, dating this motif to the New Kingdom. (L: 1) **(L)** BAR-12 is not illustrated in the EDS report. Since it is listed as having two boats in which there are plumed figures, one containing a plumed figure with arms raised and a ‘frond’ decoration, these vessels may be predynastic. A revisit and visual recording is necessary. (PP: 2) **(P)** BAR-13 features two boats with rare ‘canopies. Aside from one bovid (?) there is no further context. Three further boats have the ‘T’ feature. (P: 3) **(P)** BAR-14 is another site lacking illustration or further identifying information. **(U)** BAR-15 has three boats, one with the ‘T’ feature at one end and double ‘streamers’ at the other and another with the streamers. There are also hunters with dogs. (P: 3) **(P)** BAR-16 is also described poorly, with no illustration of a high-prowed boat with a crew of six, three tall figures near the stern-one with raised arms, being dragged by eight figures. Additionally, there is a symmetrical square boat. These depictions on a boulder may be predynastic. On the main rock face there is another dragged boat, various animals including ibex, hounds, and two male figures with bows. (PP: 2) **(P)** BAR-17: here two boat depictions have the ‘double streamer,’ suggesting it is early. (PP) **(P)** BAR-18 has a well drawn clearly pharaonic boat with cabin and steering oar. (L: 1) **(L)**

Sites BAR-19 to BAR-39 were recorded by Van Craeynest (2004) rather than the EDS/RATS survey. BAR-19 contains three square boats, two with central figures, including two dragged unusually by one figure. They have the streamers typical of early vessels (PP: 2). **(P)** A tethered hippopotamus and other animals associated with a square boat suggest an early date at BAR-20. (PP: 1) **(P)** There are no boats at BAR-21, but horse & camel riders fighting, **(L)** while a single square boat at BAR-22 is found together with animals and a plumed figure. **(U)** There are no dateable images at BAR-23. **(U)** An ‘arms raised’ figure and associated hunting dates one square and two sickle boats to the Predynastic. But two sickle boats on a boulder have no context. (P: 3) **(P)** BAR-25 has no boat petroglyphs & has horse riders fighting. **(L)** A sickle boat with central ‘arms raised’ figure has the same patination on the same surface as

four square and another sickle boat at BAR-26. (P: 6) **(P)** Uniquely at BAR-27 one of two sickle boats is towed by a cow and ten metres to the right there are two small boats, but none have helpful context. **(U)** Two boats (?) at BAR-28 are unusually seen from above, **(U)** while there are no boats at BAR-29 and only one cow and ass. **(U)**. A faint square boat associated with animals and hunting may be early at BAR-30. (PP: 1) **(P)** At BAR-31 there are no boats. The site consists of several boulders, on which can be found hieroglyphs and horses. **(L)** BAR-32 is divided in to two parts. Two darkly patinated boats, one with a central mast and sail are partly overlaid by two lightly patinated vessels, one with a sail; demonstrating that not all well patinated images are early. Three square boats, two with single-plumed central figures are located apart from the other images but are without context. (L: 4) **(L)** BAR-33's square boat with two hunting figures and gazelles may be early, (PP: 1) **(P)** while both BAR-34 **(L)** and 35 **(L)** have no boat images, possess hieroglyphs and the latter camels. Three boats at BAR-36 are associated with hieroglyphs and a dynastic praying figure. (L: 3) **(L)** Hunting is associated with four square boats at BAR-37, while two square boats twenty metres to the left are without context. (PP: 4) **(P)** There are no boats at BAR-38 and BAR-39 consists of three vessels with central mast and sail. (L: 3) **(L)**

Wadi Hajalij (S)

The two sites in this wadi are within a hundred yards of each other, about ten minutes walk from BAR-4 and the Wadi Baramiya Edfu-Mersa Alam road, which may be a pointer or signpost to these sites. HAJ(S)-1 has clear predynastic features. These include three 'arms raised' figures and their patination is the same as the boat images at this site. Figures with wedge-shaped heads are superimposed over two animals, but do not differ in patination from the remainder of the petroglyphs. Eleven boats are present, including two being dragged. Plumed hunting figures are also a feature of this site. Thus, it conforms to the predynastic pattern of a combination of boats, 'arms raised' figures, and hunting scenes. (P: 11) **(P)**

On the other hand, HAJ(S)-2 possesses dogs pursuing an ostrich, but there are no hunting figures or 'arms raised' figures. There are no less than twenty-eight boats here, including four with the double 'streamer,' 'one 'frond' boat and two with the 'T' feature. Although only these seven can be positively identified as predynastic, comparable patination on the same rock surface oriented in the same direction means that the boats here will be early (P: 28) **(P)**

Wadi Hajalij (N)

Haj (N)-1 contains a variety of sickle, square and flared boat motifs. The sickle boat has a semi-circular cabin, very high ends and a slightly off-centre mast, suggesting this is a Middle Kingdom to New Kingdom creation. The site consists of a shallow cave with a vertical rear wall, but also surrounding boulders. It would have been a convenient shelter from the sun. Hippo petroglyphs as well as ostrich and ibex are present. Boats and hunting scenes are associated here. An incurve sickle 'two frond' boat is clearly predynastic and the mass of animals associated with many of the other thirteen boats here suggest a largely early site. (P: 1, PP: 13, L: 1) (L)

At Haj (N)-2 there is a mix of sickle and square boats, one with a giraffe inside. This is an uncommon enough image in the Central Eastern Desert, but it is not found in the Nile Valley petroglyphs at all, despite giraffe representations being prevalent there. One boat has the 'T' feature. (P: 1) (P) Haj (N)-3 is unusual in having a line of (dancing?) figures, several with erect phalluses, above a hunting scene. There are fifteen boats in all, including two double 'streamer' vessels. Two ostriches appear to stand in one boat. At least one ostrich appears partly superimposed on one boat, but a difference in patination is not apparent. The presence of the hunters/dancers, boats and hunting in the same patination suggest a predynastic date for the boats at this site but is not conclusive. (PP: 15) (P)

Haj-4 has a single central masted boat. (L) (L) Haj (N)-5; the presence of a masted boat additionally indicates that this wadi was still travelled in pharaonic times. It follows the pattern of many of the clearly defined dynastic boats by standing alone, whereas clearly predynastic boat motifs are associated with related images. Two weathered sickle boats nearby indicate that they were created at different times. Petroglyphs nearby of ibex, camels and dogs, indicate that hunting was carried out here over a long period. (L: 1) (L) This is continued at Haj (N)-6 where there is a single sickle boat, camels, and a cross-hatched bovid being controlled. (L: 1) (L) At Haj (N)-7 three boat petroglyphs are related in having hammered out ends. They all have various accoutrements and the artist has picked these out rather than repeating a basic type, suggesting that these were vessels actually seen on the water. There are no hunting figures or animals at this site, suggestive of a late date. (U)

Haj (N)-8 has boats, two of them being dragged, in addition to hunters and a variety of animals including ostriches and ibex. One of the dragged boats has a mast, although this is not clear on the illustration. If this is the case, it strengthens the argument against a

predynastic dating (L: 1) (**L**) while HAJ (N)-9 is a scene of hunting without any boat depictions. (**U**)

Wadi Umm Salam

Wadi Umm Salam has the largest number of rock art sites in the Central Eastern Desert as well as the largest number of boat petroglyphs. SAL-1 has a large, rare (one of only two) example of a boat towing another boat. Found in New Kingdom tomb paintings regarding the journey to the afterlife, they are not found on any predynastic mobiliary items. The boats here do not accompany animal or hunting scenes, further supporting a non-predynastic date. (L: 4) (**L**)

SAL-2 has one boat with the 'T' feature and another associated boat. (P: 2) (**P**) The nearby sites SAL-3 (PP: 3) (**P**) and 4 do have boats with associated animals on one part of the cliff face, together with the former having a twin-plumed figure controlling a bovid and accompanied by pariah dogs.

SAL-5 has sickle, incurved, square and flared boats in addition to hippo, ibex and other animal motifs. (PP: 6) (**P**) SAL-6 is a hunting scene without boats, (**U**) while SAL-7 is a site of considerable length with many boats (sixteen) and a wide variety of animals. Three boats possess large central figures, one carrying a bow and two throwing sticks. There are three plumed figures in other boats. In one vessel stands a large giraffe of related patination, although its feet do not touch the deck. It towers over a boat containing a figure either pointing or holding a throw-stick. Neither large central figures nor the presence of an animal on board, except in rare cases of pharaonic cargo boats, are features of Nile Valley petroglyphs. In contrast to the dark patination of the boat representations and most of the animals, there is a single hippo with much lighter patination, and a single camel, suggesting the boats and hunting scenes hang together. Additionally, that seven boats have plumed and 'chieftain' figures and one has double streamers is suggestive of a predynastic date. (PP: 16) (**P**)

SAL-8, with one square boat and hunting contains no other context. Moreover, the boat is noted as having a mast, while the photo is unclear. There is a more lightly patinated hunting scene too. (L: 1) (**L**) SAL-9 contains boats, one with a single 'streamer,' a hunting scene and a double-plumed figure. This site also has a lighter patinated hunting scene akin to the

previous one showing the way people added to sites over time and that hunting continued.
(PP: 3) (P)

SAL-10: there are two boats, one with a double ‘frond’ and one with a double-plumed figure on board. A hunting scene without human figures occurs thirty metres from the boats and thus they are not associated. Two boats have variations of the ‘T’ feature (P: 3) (P) SAL-11 has a considerable amount of rock art and the boat/animal combinations suggest an early date (PP: 2) (P) At SAL-12 the presence of an elephant motif suggests an early date, but here three lighter sickle boats indicate that the animals are earlier than the vessels and there is no further context. (U) SAL-13 combines a figure with hands-on-hips with associated three boats, one of which has the ‘T’ feature. (P: 3) (P) SAL-14 is often referred to as the ‘Jacuzzi’ site as it consists of the surroundings of a dry rock pool. There are so many petroglyphs, often superimposed on others, that it can be difficult to identify individual motifs in some parts of this site. An ‘arms raised’ figure is present on one rock surface at this site but is not in context with a boat or with the main animal tableau. A lower level of darkly patinated giraffe motifs (with additional superimposed and lighter giraffes) suggests an early date. But there are also camels and ridden equids. A boat with the ‘T’ feature is present, in addition to a sickle boat with two cabins and a ‘Min’ figure controlling a bovid outside the vessel. The style of the figure’s double plumes and the triangular shape of the steering oar date this boat to the New Kingdom (contra Wilkinson, 2002: 162). It is likely that when this pool filled with rainwater, it was used over a very long period of time. There are no less than ten pariah dogs pursuing animals, but there are no human hunters. Only one predynastic boat is present, as one is definitely pharaonic and the other four do not have defining features. (P: 1 & L: 1) (M)

SAL-15: The two square boats here are associated with animals and plumed figures, including one controlling an animal. (PP: 3) (P) SAL-16 has a square boat with two ‘arms raised’ figures on board and three ‘fronds.’ Unusually, as at BAR-4, a clear predynastic vessel with the three ‘fronds’ is not in close association with animals, although there are ibex, an elephant, giraffe and antelope at this site. (P: 4) (P)

SAL-17: Two square boats and a single-plumed figure are present, but no further context, (U) while SAL-18 has a crude figure among various animals. (U) SAL-19 consists of a single flared boat and cannot be dated without additional means of assessing the flared boat type. (U) SAL-20 has no boat representations, but it does possess a plumed figure together with

four other plumed figures, one carrying a bow and another with a throw-stick. A bovid and a pariah dog are present. This is one of only three sites in the Eastern Desert where an ‘arms raised’ figure occurs where there are no boats. **(P)** SAL-21 has a single boat with one ‘frond’ and figures standing near to but not participating in a hunt, but there are no further features which allow definite dating. **(U)** At SAL-22 There is a hunting scene **(U)**, while at SAL-23 two boats with double ‘streamers’ are associated with equally darkly patinated animals overlaid by a ‘nefer’ sign, indicating continued visits here into the pharaonic era. A camel and two figures with shields indicate an even later presence. Two ‘arms raised’ figures, one uniquely upside down, are also present. **(P: 2)** **(M)** At SAL-24 no boats, only animals including two camels, are found. **(L)** SAL-25: a square (not illustrated) and two sickle boats are associated with plumed, hunting figures. **(PP: 3)** **(P)** SAL-26 has an animal control scene and no boat representations. **(U)** At SAL-27 plumed hunting figures, animals and a plumed figure in a square boat are suggestive of a predynastic date. **(PP: 3)** **(P)**

SAL-28 has spirals and ‘grids.’ SAL-29 contains a giraffe in a square boat with double ‘streamer’ and a flared boat, also with a double ‘streamer.’ A variety of animals are closely associated and with the same patination. **(PP: 3)** **(P)** At SAL-30 a square boat with a figure with hands on hips is present along with, but not closely associated with animals and pariah dogs. **(U)** SAL-31 is another site with square boats (two vessels), pariah dogs and other animals, including giraffe. The boats and animals are on the main face and a boulder respectively, so are not closely associated. The presence of giraffe suggests an early date, but such animals were taken in trade or tribute via Nubia in pharaonic times, therefore dating is inconclusive. **(U)** SAL-32 sees figures with bows and ibex are on the wadi face together with a square boat with a ‘T’ feature variant. **(PP: 1)** **(P)** SAL-33 has a square boat with single ‘frond,’ dogs, a male plumed figure with a bow and another single-plumed figure controlling a bovid. The combination of these motifs is suggestive of a predynastic date. **(PP: 1)** **(P)** SAL-34: The boat here has either a long rectangular cabin or an awning, in addition to a tow rope. The ‘cabin’ shape may represent the cargo in a pharaonic vessel. **(L: 1)** **(P)** At SAL-35 multiple-plumed figures and three ‘arms raised’ figures (one with multiple plumes) are found here. ‘Arms raised’ figures are present at two locations at this site, on the main cliff face and on another nearby. The figures are associated with a controlled bovid and stand amongst various animals including pariah dogs, ibex and giraffe. Three square boats are not integral to this scene, but are located on the rear of a boulder in front of the cliff face. One of the boats

has a central plumed figure and a fronded stern. Given this combination of motifs, it is possible that the three square boats too are predynastic. (PP: 3) **(P)**

SAL-36 has a single square boat, a giraffe, dogs chasing ibex and plumed figures, suggesting an early date. (PP: 1) **(P)** SAL-37 features a sickle boat with central mast carved by itself on one rock, and this must be pharaonic or later. There is also a square boat associated with twin-plumed figures carrying bows and hunting with dogs on another rock two metres below. As is common, the sickle, later, boat stands alone, while the square boat has a context of other motifs-specifically a hunting scene. It is possible that because they stand apart, the sickle boat is pharaonic and the square boat later, but the former is only illustrated by a line drawing and so patination cannot be compared. (PP: 1, L: 1) **(M)** SAL-38 consists of a number of rock faces: a large rock at the base of the cliff face, a flat rock fifteen metres to the right, boulders in front of the main face, two large boulders to the left and the main face itself. Therefore, it does not follow that if one predynastic element can be identified, the whole extensive site is contemporaneous. The large rock has a sickle boat which is not clearly illustrated. It has three ostriches on deck. There is also a flared boat with an elephant above and various animals, but without overt hunting. The flat rock contains only miscellaneous animals. The front boulders have two boats with the 'T' decoration, a plumed figure holding a staff and dogs hunting antelope, ibex and ostriches. Two figures with shields of much lighter patination are also present. One 'T' feature boat has a central figure with its arms raised, but the left is not incurved and the right is damaged. The large boulder to the left is described as having a square boat with 'fronds' and an 'orant figure'-used by the editors usually to describe an 'arms raised' figure, but there is no illustration. Another boulder has a hunting scene on one face and a square boat with a central plumed figure. The main face contains one sickle and three square boats, one with a 'frond' at each end. There are various animals, including camels. Thus perhaps one, and possibly four, boats at this site could be of predynastic date. (PP: 4) **(P)** SAL-39: With the presence of a square boat with two oval cabins, but no figures or hunting scene, this site cannot be classified. **(U)** SAL-40 is a rare cave site and has six boats, plumed figures and a mass of animals, including many superimposed. The presence of spirals and hieroglyphs complicates dating. The animals appear more in procession than being hunted as there are no chasing hunters and dogs thus context is lacking. **(L)** Despite the presence at SAL-41 of a dragged square boat with a central hands-on-hips figure and a few animals, plus a controlled bovid, there is no overt hunting, nor

additional features to date the four boats. (U) SAL-42 consists of two large fallen boulders with a square boat on each in addition to dogs, ostriches, ibex, and other animals but no figures or obvious hunting. One square boat has a 'T' feature variant. (PP: 1) (P) SAL-43 has no boat petroglyphs, while at SAL-44 a large plumed figure with hands on hips stands in one boat, while there may be a single-plumed 'arms raised' figure in another with a variant on the 'T' stern feature, perhaps marking this boat as predynastic, and three others are associated with it. A large darkly patinated bovid is over-carved on these boats but it is in outline, rather than the usual in-filled predynastic motif. (PP: 8) (P) At SAL-45 there are numerous animal depictions, including hippos and giraffe, but there are no boats. (U) SAL-46: The three boats here are not illustrated and one is recorded as having a mast. (L: 1) (L)

Wadi Abu Mu Awad

MUA-1 has a square and sickle boat. The former has a tow rope and the latter is being dragged by five simple figures, but there is no context. (U) There are no boat representations nor date markers at MUA-2 and 3. (U) MUA-4 has five simple square boats and four bovids under control without any other context. (U) MUA-5 has a square and a flared boat, but no context. (U) At MUA-6 there are boats, ibex and giraffe. But the boats are located to the sides with the animals in the centre and there are no figures. Three of the sickle boats have a mast and rigging and so must be of a late date. There are three towed boats at this site, but there is no indication from design or decoration of date. (L: 3) (L) MUA-7: A single sickle boat and a few scattered animal images do not allow dating. (U) MUA-8 consists of a single square boat with oars, double 'streamer' and 'frond' at either end but with no context. (U) MUA-9 comprises a single sickle boat with large block cabin (for cargo?) and a triangular-bladed oar and thus must date from the New Kingdom or later. (L: 1) (L) MUA-10 is a considerable site on seven boulders and the main face above them. There are no less than five Horus falcons and two Min figures and many animals including ibex, antelope and camels here. There are also some hieroglyphs. Two masted boat images are present, one with a triangular-bladed steering oar and double sail. These cannot be predynastic. A square boat with a 'T' feature but uniquely with the addition of two vertical lines on top of the stern contains a double-plumed figure. It is making an s-shaped gesture with its arms, as do figures in one of the masted boats and a small boat to its rear. These are not feathered. It is not clear if the three boats with figures are contemporaneous or whether later copying has taken place. A single-plumed figure controls a bovid and there are two rows of ostriches in addition to a hunting scene. The boat with the central plumed figure stands on a rock together with hieroglyphs and

a Horus falcon, so cannot be safely identified as early and the plethora of pharaonic motifs argues for a late date. (L: 4) (L) MUA-11 also has definite pharaonic motifs including a sickle boat with twin steering oars, one with sail and rigging and hieroglyphs. A boat with a slightly incurved prow (but simple stern) has a bovid standing within it, but this is in outline rather than being pecked out. These motifs thus appear to be dynastic. However, an orant figure in a sickle vessel with 'fronds' is recorded but not illustrated. This confuses the issue, but without an illustration to check secure identification and dating is not possible. (L: 3) (L) MUA-12 contains a pharaonic barque on a plinth continuing the pharaonic theme of many of the petroglyphs found in this wadi. One square boat contains a central figure with its arms raised straight upwards but not incurved. (L: 1) (L) MUA-13 in RATS is a modern charcoal drawing of a person sheltering under a tree, probably by the Ababda Bedu and excluded from this study. MUA-14 has a boat with central mast/sail and triangular-bladed steering oar. It is therefore of New Kingdom date. (L: 1) (L) MUA-15 has a plumed figure in a boat with arms raised and four other boats for which further context is lacking. (P: 1) (P) On the other hand, MUA-16 has both a large multi-plumed figure and a stick figure with arms raised, but not in the classic predynastic pose, two square boats and dogs hunting ibex. The 'arms raised' figure is not close to the boats and there is a schematic figure in a boat which might suggest later date for this vessel. (U) MUA-17 has plumed hunting figures but no boats. (U) MUA-18 has a sickle boat with both ends incurved in likely pharaonic style and there are two other boats with no identifiable features or context. (L: 1) (L) At MUA-19 a Horus falcon and camel are clearly late, and a badly weathered boat with 'fronds' is not illustrated. (L) MUA-20 consists of a boulder with ridden horses and camels and another with a large square boat but no other context. (L) At MUA-21 two single-plumed figures stand in a square boat, but there is no context. (U)

Wadi Miya

Miya-1 contains a dozen boats. On one part of the cliff face there is an incurved boat with a central 'arms raised' figure. Giraffe and other animals are situated around them. Thus this part of the face can be dated to the Predynastic. There are twelve boats in total, including five simple sickle designs which are hard to date, but are associated with darkly patinated elephants, and a nearby plumed figure with a bow, whereas there are lighter camels present. A square boat with prow and stern decoration is associated with an 'arms raised' figure on another part of this face and may therefore be predynastic. Thus all the boats at this site may be predynastic. (P: 12) (P)

Neither MIY-2, consisting of a figure leading a horse (L) nor 3, one large speckled bovid (p L) have any boat motifs, while MIY-4 has six. All have either a central mast/sail or a triangular-bladed steering oar marking them as pharaonic or later. (L: 6) (L) MIY-5 and 6 have no boats and numerous horse/camel riders fighting (L), while MIY-7 consists only of a single dragged boat. (U)

Wadi Abu Iqaydi

IQA-1 has no boat petroglyphs, while at IQA-2 there is a very high-prowed boat perhaps reminiscent of the Tomb 100 motif which is associated with a hunting scene. (PP: 1) (P) IQA-3 has two simple square boats but the other petroglyphs here are camels, Blemmye marks and bovids drawn in a style very untypical of the in-filled predynastic animal representations (L: 2) (L) At IQA-4 there are no boat motifs, an unfinished side view crocodile, camels and Blemmye signs. (L) IQA-5: Three boats with central masts can be dated to the New Kingdom or later. (L: 3) (L) IQA-6 and 7 have no boat motifs and indeterminate hunting scenes (U), while IQA-8 has a double-plumed figure with arms raised but not incised by a sickle boat and two other boats on another rock nearby. (PP: 1) (P) At IQA-9 a single square boat is overlaid by camels and probably Arab symbols. This shows that the boat is earlier than the motifs superimposed upon it, but in the absence of any other context this gives no useful information concerning the featureless vessel. (L) IQA-10 reinforces the point that plumed figures are not necessarily an indication of an early date as a boat containing two such figures has the same patination and style of carving as another with central mast and Greek writing. The right-hand figure in the boat on the left has the same arm gesture as the figure on the prow of the boat on the right. (L: 2) (L) IQA-11 has a hunting scene with no boat representations. (U) At IQA-12 the simple square boat has no context. (U) At IQA-13 there are no boat motifs present with two undateable hunting scenes (U), while IQA-14 has one boat with at least one mast and a second which has no dateable context. (L 1) (L) IQA-15 has hunting scenes without boat petroglyphs. (U)

Wadi Dahabiya

DAH-1: There are ten boat motifs at DAH-1, but unusually for a site with so many boat petroglyphs very few animal motifs and no figures at all. Two of the square boats have the

‘T’ motif, but none have other dateable features. (P: 2) (P) DAH-2: This is also true of the single simple sickle boat at DAH-2. (U)

Wadi Shalul

At sites SHA-1 through 3 there are no representations of boats. SHA-1 has a large hunting scene with animals, especially asses, portrayed as in southern wadis, (PP) while SHA-2 has camel riders with weapons (L) and SHA-3 one bovid (U). SHA-4 has hieroglyphs and men with shields fighting as well as camels and horse riders in conflict. Two of the three square boats present have no identifiable features. The third has two double-plumed figures, one oddly almost constituting the prow. But with no further context, the presence of pharaonic and later motifs suggests the boats here are not predynastic. (L: 3) (L) SHA-5 has no boat petroglyphs while SHA-6 contains one boat with a central mast. (L: 1) (L) SHA-7 has plumed hunting figures and an ibex or oryx standing in a square boat, but plumed figures do not necessarily demonstrate an early date in the absence of further supporting evidence. (U) SHA-8 consists of a few animals including a horse and camels (L). At SHA-9 a single square boat with two ‘fronds’ point inwards on the prow and one points outwards at the stern (U). Neither SHA-10 nor 11 have any boat motifs. Both have horse and camel riders (L). SHA-12 has a sickle boat with an animal headed stern motif facing inwards and a vessel with a central mast, both dynastic. (L: 2) (L) SHA-13 has a square boat with a central figure with arms raised and ‘T’ stern. Another square boat and three sickle motifs have no dateable features. (P: 1) (P) The single boat at SHA-14 has already been identified as being of Naqada III date. (P/Early Dynastic) (P)

Wadi Abu Wasil

At WAS-1 a single figure and an ostrich stand in a square boat under a canopy/cabin. The boat has a decorative feature at the stern and a steering oar. The latter has a triangular blade. The boat is of medium patination, while two nearby plumed figures are dark, suggesting the boat is later. (L: 1) (L) WAS-2 has a unique representation which looks like a dynastic boat model. (L: 1) (L) WAS-3 consists of a number of rock surfaces with modern graffiti, ‘altars’ and four boats, one having the stern ‘T’ feature. (P: 1) (P) WAS-4 One centrally-masted boat cannot be early, while two other square boats with in-filled hull ends are unusual and have no features or context to enable dating. (L: 1) (L) WAS-5 has only animals. (U) WAS-6 has a single-plumed figure in a simple boat but no dateable context. It is near a putative map on a separate rock and there are animal motifs nearby, but not in context. (U) WAS-7 has a slim

plumed figure bearing a resemblance to one at SHA-4 (RATS 126). One square boat has the 'T' stern appendage, and there is a scattering of animals. (P: 3) (P)

WAS-8 contains Blemmye marks, sandals, indistinct animals and a single square boat, but this is undateable due to lack of further features or context (L: 1) (L) There are four boat motifs at WAS-9, one with the 'T' feature, and unusually another has well-delineated six standing and three sitting figures on deck. A double-plumed ithyphallic figure with a bow stands nearby. (PP: 4) (P) WAS-10 is a significant part of RME Site-26, which encompasses both sides of the wadi. There are eleven boats in all. The dragged boat with a central 'arms raised' figure, and two square boats on a triangular and square rock respectively in front of the main face, have the context of hunting, plumed figures and control of cattle. On the main face, twin plumed figures (two with bows) stand in a unique five person group in a square boat with two 'fronds' and double 'streamer.' Another figure, carrying a throw-stick, and one with arms raised stand in two boats, the latter a three fronded vessel. All these boats are likely to date to the Predynastic. (P: 7) (P) WAS-11 has a single boat with schematic figure and triangular-bladed steering oar. (L: 1) (L) WAS-12's two boats have few defining features. But the steering oar on one and the unusually long oars-not typical of predynastic vessels, on the other argue against an early date. (L: 1) (L) WAS-13 has two square boats, but they are the only petroglyphs at this site and have no distinguishing features. (U) Central mast and sail at WAS-14 mark a dynastic vessel. (L: 1) (L) At WAS-15 seven square boats include one with two single-plumed figures on board. The boats are surrounded by animals, but there is no hunting activity (U) while at WAS-16 three boats are associated with an 'arms raised' figure and hunting scene. (P: 3) (P) Unfortunately, none of the four boats at WAS-17 are illustrated. However, one is noted as possessing a high prow and 'fronds' at both ends and also a sail, so this particular vessel cannot be predynastic. (L: 1) (L) WAS-18 has three boats, and one of the two central figures is plumed and carries a throw-stick, plus two double-plumed figures, one controlling a bovid. A giraffe, ibex and antelope are also present. (PP: 3) (P) WAS-19 consists of two boats, one lightly patinated sickle boat with very long oars, and a square boat with the only central figure carrying a mace. Various animal motifs are also present. The mace-bearing figure has plumes similar to those at WAS-10. There is also a double-plumed figure controlling a bovid. (PP: 1) (P) Was-20 consists solely of a square boat. A double-plumed central figure carries two throw-sticks. Pharaonic tomb paintings show the deceased hunting with a throw-stick in the marshes, but these figures are never shown plumed in this manner often seen in the rock-art. (PP: 1) (P) WAS-21 has a single square boat with a very crude central single-plumed figure, and associated plumed hunting

figures with dogs. (PP: 1) **(P)** WAS-22 has no boat petroglyphs present **(U)** and WAS-23 consists of a horse and rider & figure with shield. **(L)** At WAS-24 a single figure drags a square boat with many crew but no dateable context. **(U)** WAS-25: Two non-illustrated boats are rarely located in a cave with plumed hunting figures outside, but the association is not described as close. **(U)** WAS-26 has a boat with a central double-plumed figure carrying a bow in the same manner as the two figures at WAS-10. Because of this striking similarity this vessel can also be classified as predynastic. Three other boats are present with the same patination. (P: 4) **(P)**

Wadi Mineh

MIN-1 is a mixed site with Arabic writing, Blemmye signs, and a cow suckling a calf, the basis for the Egyptian hieroglyph meaning “joyful.” A mélange of animals, including camels, is engraved over two simple sickle boats, but it is only possible to conclude that the animal motifs are later. **(L)** MIN-2 has a camel rider, **(L)** while at MIN-3 armed riders and a boat with rigging suggest a late date. (L: 1) **(L)** MIN-4 has no boat motifs. Min-5 is again a mixed site. There are double-plumed hunting figures together with armed equid riders and camels. Three boats with central masts are clearly late. (L: 3) **(L)** MIN-6 with sixteen boat petroglyphs is a considerable site. Two vessels have the ‘T’ feature and one rare example may have an animal-headed prow. This is associated with pharaonic boat types. The other boats have no context to aid dating apart from a giraffe and camel. (P: 2, L: 1) **(M)** MIN-7 and 8 have undateable animals. **(U)** At MIN-9 a lotus sniffer, camels and a range of animals are present. There are also double-plumed figures, including two with hands-on-hips, but insufficient context to date the two sickle boats here. **(U)** MIN-10: Two sickle boats with central ‘arms raised’ figure are clearly predynastic. A further square boat may be. (P: 3) **(P)** At MIN-11 and 12 there are no dateable motifs. **(U)** MIN-13 has six boats, but only three are illustrated. Two square boats have a central figure, one with hands-on-hips. Additionally, there are other plumed figures and animals including giraffe, ostrich, ibex, antelope and hippo. A plumed figure controls a bovid (PP: 2). **(P)** MIN-14 (RME-24b) is a cave site, and was a resting place over a wide period of time. Latin inscriptions, in addition to Nabataea to Coptic, suggest that persons on trading missions reaching to India stayed here, two even identifying the year and month of the stay. These were summer months, suggesting that travel was at night and that the travelers rested in the cave during the day. Thirteen boat representations are found here and they appear to range over a wide time period. A detailed vessel with central mast and sail is clearly late. On the same surface there is one of the three

Central Eastern Desert boat motifs dateable to Naqada III. It is well drawn and has a thin stern, as opposed to the triangular version from the late predynastic, and therefore may be related to the boat on the Narmer palette. It also has a falcon on the prow in the horizontal perch position seen in Nile Valley art before the middle of the First Dynasty. The presence of definitely one and perhaps two Narmer serekhs at this site support an early First Dynasty date. However, there are also two boat representations with central 'arms raised' figures in the classic pose, and another with arms raised high above the head but not equally turned inwards. There is additionally a boat with a central hands-on-hips figure with s-shaped prow and 'frond,' suggesting that three vessels at this site are predynastic. There is a further boat with s-shaped prow and the triangular decoration at the stern seen in predynastic boats especially in the Wadi Kanais. Although this lacks any 'fronds,' it appears so similar that it too can be assigned to the Predynastic. Two boats with mast and rigging inside the cave are clearly late. Three simple sickle and one square boat lack distinctive features or context to date conclusively. (P: 4, L: 3) **(M)** MIN-15 consists of lightly patinated animals, one boat with a mast which cannot be predynastic, and a boat with the 'T' feature. (PP: 1, L: 1) **(M)** MIN-16 has no boat representations. At MIN-17 there is one plain sickle boat and a square boat with the 'T' stern feature (PP: 1). **(P)** MIN-18: Two 'arms raised' figures and a hunting scene can be identified and one boat is associated with these. (P: 1) **(P)** MIN-19 consists of various animals, hunters and men on horseback from a later date, all of light patination, and a single boat with a central figure. This figure has its arms in an 'S' gesture, with one hand on hip and one raised. **(U)** MIN-20: thirteen boat motifs occur at this site, four of which are not illustrated. The site is in three parts. The first is on a smooth vertical rock on the wadi floor and has a crewed sickle boat, a square boat with a 'frond,' and another square boat carrying a central plumed figure with outstretched arms. A single-plumed figure accompanied by a dog aims a bow at a tethered ostrich. Various ibex are present, as is a bovid controlled by one of three small figures. One of these has its arms outstretched, but not incurved. However, the bovid has stripes, and its horns transcribe a full circle, very different from the simple in-filled bovids typical of predynastic examples. The boats plus hunting may compose a predynastic scene. Ten metres up the main face a square and sickle boat have no context, while on a smooth rock up the cliff face is an incurved sickle boat with three 'fronds.' There is also a square boat with an ostrich on board, an indistinct boat with three figures, and another square boat with a figure wearing some kind of headdress. In addition, there are three small sickle boats with cabins. There appears to be no difference in patination between the motifs and the incurved boat marks representations here as predynastic. (PP: 11) **(P)** MIN-21: An incurved

square boat with an s-shaped prow and three ‘fronds’ accompanies three square boats. Each has a cross-like stern feature. A single-plumed figure stands to the rear of the top boat. All components have the same patination. It is notable that there is a clearly predynastic boat design, but no hunting scene occurs here. (P: 4) (P) MIN-22 contains five boats. One square crewed boat has darker patination, but three other vessels with central mast and sail have the same patination as Greek lettering. Bovids with udders (one with circular horns) also suggest a late date. (L: 3) (L) MIN-23 has six boats, one with three single-plumed figures on board. Numerous animals of varying patinations do not provide sufficient context. (U) MIN-24 comprises cartouches and is excluded from the corpus. MIN-25 lacks any illustrations, making dating problematic at this site. Two ‘high-prowed’ boats carrying ‘dancing goddesses’ are reported to be present; one with double plumes. Dancing goddess is usually a euphemism for an ‘arms raised’ figures, although not every such labeled figure has the arms turned inwards in the classic pose. (PP: 2?) (P)

Wadi Qash

QAS-1 has no various animals with no dateable context (U), while at QAS-2 there is a single boat with central mast and sail. (L: 1) (L) QAS-3 (RME-18) is a major site and one of the rare ones in and around a cave. With at least forty-one boat motifs, it constitutes the greatest concentration of these petroglyphs anywhere in the Eastern Desert. Although visited and reported to have been recorded by the RATS team, it has never been properly published. A mass of rock art occurs inside, on top of and outside the cave on the three large boulders which constitute it. There is evidence that, like MIN-10, this site was visited over a long period, with one empty and two Narmer serekhs, Greek inscriptions, Christian symbols, Arabic writing and wusum. Inside the cave, Winkler chalked some of the motifs, including a Naqada-style sickle boat with a “Min’s Thunderbolt” standard and this remains to this day. To the left of this is a rock surface covered in petroglyphs, such that it is difficult to identify a composition and sometimes problematic distinguishing individual motifs. Only a little light enters the cave. It is sufficient for viewing, but not to affect patination. Two dragged boats are located here together with figures controlling/hunting hippopotamus, crocodiles, other animals and an ‘arms raised’ figure. If this is assumed to be integral to this scene, then the two boats can be assigned a predynastic date. This would fit with the Naqada boat to the right also inside the cave and suggest a Naqada II date for these internal motifs. While these can be described as constituting a scene, other motifs both inside and outside the cave, do not have such a context. This site further illustrates the need for caution in using patination to date the

rock art. On the top surface of one boulder there is a series of petroglyphs, including a number of superimpositions. These include bovids and boats with central plumed figures. Two boats have an s-shaped prow, but also the 'T' feature, which is not clearly identified with predynastic boat representations, especially those containing or associated with the arms raised figure. In this example, the single-plumed figure does have its arms raised. But there is an implement, perhaps a bow, in one hand. This never occurs in the classic 'arms raised' figure pose. There is a bovid superimposed on this boat with a somewhat lighter patination. The boat with central mast and sail at the top is more akin in patination to the other boat, although perhaps a little lighter. Being on the top surface, these motifs have been extremely exposed to the sun. Thus one would expect heavy patination of motifs placed there. However, at the front of the site on a low rock there are two serekhs. One clearly has the catfish of Narmer, first king of the First Dynasty, and the other is empty. These petroglyphs are thus dated to around 3100 BC. But these petroglyphs are heavily patinated, back to the colour of the rock. This suggests that the motifs on the top surface are younger than the serekhs, or that the rock has weathered in a way we do not understand if the motifs on top are stylistically dated as older. To the right of what is probably another Narmer serekh there is a hunting scene with much lighter patination. From this one can conclude that not every figure with arms raised and even curved round to some extent can be considered an 'arms raised' figure. Elsewhere in the cave two boats, one with a variant of the 'T' feature, lie above a bird, possibly a falcon. In horizontal perch position this dates bird and perhaps the boats to the first half of the First Dynasty. There is another boat, graffitied over in the 19th century, which has a variant of the 'T' feature, but no dateable context. Only two other boats can be dated with any confidence. One is of the triangular stern type from Naqada III. The other is an incurved motif with s-shaped prow and triple "fronds" which can also be assigned an early date. Thus, from this site seven boats can be dated, but twenty-four can not. (P: 5, L:3) (M)

Wadi Hammamat

The shaded side of a large rock and a boulder at Qasr al Banat constitutes HAM-1. They are covered with a huge variety of rock art which often makes it problematic to pick out individual images. These include boats, animals-including giraffe, bovids, camels and ibex, cupules, many overlaid on each other. One sickle boat has double rear steering oars and two more a central mast (L: 3) (L) HAM-2 includes a falcon of medium patination superimposed on older pecked motifs. These include one sickle and two square boats without identifying features, but nearby animals are of lighter patination. (U) At HAM-3 three boats have central

masts and cannot be predynastic. Hieroglyphs are also present. A boat being dragged by a simple figure has no distinguishing features. (L: 3) (L) HAM-4 has a mass of rock art, but several boats which can be identified as predynastic with confidence. There are two sickle boats with 'standards' akin to those portrayed on D-Ware. There are also two incurved boats with three 'fronds.' Additionally, a vessel with extremely high prow is found here. Both Červíček (1974) and Engelmayer (1965) compare this design to that of the 'Black Boat' in Tomb 100. The incurved boat is in the interior of the boulder-made cave, while the distinctly Naqada II boats are on the top, suggesting the inside of the cave was full up with images when someone rested here. The four other boats here have no identifying features. (P: 5) (P) HAM-5, with the beginning of one boat, does not provide a dateable context or features. (U) HAM-6 has no boat representations plus animals & a figure with a bow. (U) HAM-7 has three square boats with high ends together with cartouches and hieroglyphs. There are two incurved vessels with the s-shaped prow and three 'fronds.' A number of pharaonic figures have been placed within one of these boats but are naturalistic and plainly from a different époque. Two square boats have double streamers and one the 'T' stern feature (P: 2) (P) At HAM-8 four boats are spread along the cliff face. One is a dynastic vessel with a rear steering oar. Another is a featureless sickle boat. On a nearby overhanging part of the main face are two boats, including one with two square cabins where these and part have been colored. This is the only such boat representation in the whole Eastern Desert. The pigment for this came from beneath the rock on which the depiction is made and thus the decoration was opportunistic. This boat does bear a strong resemblance to vessels on the T100 wall painting, although the boat's hull is thick rather than having clubbed ends. (P: 2, L: 1) (M) HAM-9 consists of cartouches and is excluded from the corpus. HAM-10 possesses no boat petroglyphs, various animals and a pharaonic figure with a bow. (L) HAM-11 has four boats, one of which has a somewhat s-shaped prow and a unique but definite set of three 'fronds.' Ibex are present, but no overt hunting scene. This one boat can be assigned to the Predynastic but the others have no dateable context. (PP: 1) (P) HAM-12 has one simple sickle boat amongst pharaonic motifs, including a lotus sniffer, hieroglyphs and a djed pillar. (L: 1) (L) HAM-13 is a problematic site because although it has a large number of boats (fifteen) drawn across a slightly overhanging rock face. A few ibex, camels and two dogs are the only non-boat motifs present. The identification and dating of these boats is complicated by the presence of a vessel with mast and rigging and one with a prominent central 'arms raised' figure. There appears to be only little, although definite, difference in patination between the two. In this case we cannot rely on assumptions about the rate of change in desert rock

varnish, or indeed that it necessarily forms at all in some cases. Very little is known about the different rates at which rock patination changes in different environmental circumstances.

A boat with a central mast must be dated to the pharaonic period or later. The one with the central 'arms raised' figure should be assigned to the Predynastic. This is a difference of at least two thousand years, and the former probably stood alone for this time. The masted boat appears to have a slightly lighter patination, although this was a question of dispute on several EDS expeditions. There is one boat petroglyph at this site which does have a convincingly lighter patination. It has the same tone as nearby signs which are probably wusum and thus this appears to be a modern copy. Given that even the patination difference between this modern copy and the predynastic one is not large, it does suggest that the rate of varnish change on this rock surface may have been extremely slow, as there is potentially a gap of three thousand years between the 'arms raised' figure boat and the modern one. Another boat has a mast-like projection, albeit not exactly vertical, and a large steering oar and so is probably pharaonic. A sickle boat with two large steering oars is also pharaonic. With the exception of the 'arms raised' figure boat, most of the other vessels either have a steering oar, suggesting a late date, or a simple design which makes secure dating impossible. This site appears to attract rock artists over the ages, for the wadi Hammamat is a long route and has other rock surfaces which could have been used. (P: 1, L: 4) (M) HAM-14 consists of a single sickle boat with central cabin but no dateable features or context. (U) HAM-15 has no boat representations. (U) HAM-16: a boat with a sail. (L: 1) (L) HAM-17 has a clearly dynastic boat with a mast and steering oar, (L: 1) (L) while the two quarry sites have no boat images but HAM-18 has two 'arms raised' figures, (P) HAM-19 consisting of animals being hunted (U).

Wadi Atwani

ATW-1 has various animals, including camels. The elephants being hunted by plumed figures with bows recorded by Winkler in this vicinity could not be re-located. (L) At ATW-2 a single square boat with a central giraffe has nearby animals of dark patination compared to other animal motifs at the site, but no further features or context. (U) ATW-3 consists of animals, including ridden camels. (L) ATW-4 consists of one sickle boat with two cabins lying among unusual motifs of hands, contentiously identified crocodiles, geometric patterns and other animals. Some of these images are unusual compared with other wadis and do not assist dating. (U) At ATW-7 comprises various animals one boulder plus figure with camel

on another, (L) while ATW-8, close to the Wadi Hammamat, has two boats with a single 'streamer.' In one boat a figure has its arms in the air (PP: 2). (P) ATW-9, also near to the junction with the Wadi Hammamat, and has a single boat with the 'T' stern feature, but no other dateable context. (PP: 1) (P) ATW-10 has two square boats, one with a central 'arms raised' figure. (P: 2) (P) ATW-12 is a considerable site with twelve boats around a cave, although there is nothing inside it. Three vessels are described as 'high-prowed' but not illustrated and one is a simple sickle boat. Six are illustrated, of which two have double 'streamers' at one end. On one boat there are two single-plumed figures, another has a central figure and a third a double-plumed central figure with arms raised to the shoulders. In a large vessel there are two distinctive figures. One stands near the prow engaging in what has been described as a pointing gesture towards the Nile. The other figure stands at the rear holding one of two 'fronds' projecting from the top of the stern. Additionally, there is a bull 'standard' at the prow with horns which appear to be extended with ribbons or streamers. Also present at this site are various animals and two figures each controlling a bovid and hunters. (PP: 9) (P) ATW-13 consists of two boats, one inside the other. Each has an 'arms raised' figure standing in it. (P: 2) (P)